OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:	* 2. Type of Application:	* If Revision, select appropriate letter(s):
☐ Preapplication	☒ New	
☒ Application	☐ Continuation	* Other (Specify):
☐ Changed/Corrected Application	☐ Revision	

* 3. Date Received:	4. Applicant Identifier:
02/03/2014	

5a. Federal Entity Identifier:	5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Living Classrooms Foundation' INC

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
52-1369524 ✓	6061037600000 ✓

d. Address:

* Street1:	802 South Caroline Street
Street2:	
* City:	Baltimore
County/Parish:	
* State:	MD: Maryland ✓
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	21231-2331

e. Organizational Unit:

Department Name:	Division Name:
Education	

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:	Ms.	* First Name:	Christine
Middle Name:			
* Last Name:	Truett		
Suffix:			

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number:	410-685-0295	Fax Number:	410-752-8433

✓ * Email: christine@livingclassrooms.org

Recd. 7/11/14

NE-963298-01-0

GRANTS.GOV

Grant Application Package

Opportunity Title:	Environmental Education Model Grants -- Solicitation No
Offering Agency:	Environmental Protection Agency
CFDA Number:	66.951
CFDA Description:	Environmental Education Grants
Opportunity Number:	EPA-EE-13-01
Competition ID:	
Opportunity Open Date:	12/09/2013
Opportunity Close Date:	02/04/2014
Agency Contact:	Ginger Potter EEgrants@epa.gov

This opportunity is only open to organizations, applicants who are submitting grant applications on behalf of a company, state, local or tribal government, academia, or other type of organization.

Application Filing Name: Living Classrooms Foundation

Select Forms to Complete

Mandatory

Application for Federal Assistance (SF-424)

Project Narrative Attachment Form

Budget Information for Non-Construction Programs (SF-424A)

Optional

☒ Other Attachments Form

Instructions

Show Instructions >>

This electronic grants application is intended to be used to apply for the specific Federal funding opportunity referenced here.

If the Federal funding opportunity listed is not the opportunity for which you want to apply, close this application package by clicking on the "Cancel" button at the top of this screen. You will then need to locate the correct Federal funding opportunity, download its application and then apply.

OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

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- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 02/03/2014

4. Applicant Identifier:

5a. Federal Entity Identifier:

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Department Name: Education

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Ms.
* First Name: Christine
Middle Name:
* Last Name: Truett
Suffix:

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number: 410-685-0295 x 212
Fax Number: 410-752-8433

* Email: christine@livingclassrooms.org

Rec. 8/21/14

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*** Other (specify):**

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.951

CFDA Title:

Environmental Education Grants

*** 12. Funding Opportunity Number:**

EPA-EE-13-01

*** Title:**

Environmental Education Model Grants -- Solicitation Notice for 2013

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Baltimore City, MD

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Masonville Cove Environmental Education Center Programming

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 3rd ✓ * b. Program/Project: 2nd ✓

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/01/2014 ✓ * b. End Date: 09/01/2015 ✓

18. Estimated Funding ($):

* a. Federal	75,000.00	56.24
* b. Applicant	58,379.00	43.76
* c. State		
* d. Local		
* e. Other		
* f. Program Income		
* g. TOTAL	133,379.00	

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	Mr.
* First Name:	James
Middle Name:	Piper
* Last Name:	Bond
Suffix:	
* Title:	President & CEO
* Telephone Number:	410-685-0295
Fax Number:	410-276-6347
* Email:	james@livingclassrooms.org
* Signature of Authorized Representative:	James P Bond
* Date Signed:	8/21/14

Rec'd. 8/21/14

3. Work Plan.

(a) Project Summary

i. Organization and Partnerships: Living Classrooms Foundation (LCF) is a non-profit educational organization, headquartered in Baltimore, MD, with a distinctive competency in experiential learning - literally learning by direct experience, or "learning by doing." LCF strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 25 years, Living Classrooms has provided meaningful learning experiences with academic and real-world implications to a wide variety of audiences, with a special emphasis on serving at-risk youth. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 40,000 students a year enrolled in diverse programs that take place on our campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships.

Recently, our environmental education and shipboard programs have expanded to serve greater numbers of Baltimore's youth with the opening of the Masonville Cove Environmental Education Campus in South Baltimore. Living Classrooms Foundation leads school-based and community environmental education programs at the MCEEC, which is located at 1000 Frankfurst Avenue, Baltimore, MD 21226 (EPA Region 3). The Masonville Cove Environmental Education Center (MCEEC) building opened in April 2009. This near "net-zero" energy "green building" serves as a hub for Living Classrooms' school-based educational programs, environmental activities centered on the revitalized Masonville Cove shoreline, and myriad community events. The building features two state-of-the-art science labs for students, interactive kiosks, aquarium tanks filled with native creatures, and a great room for meetings. The surrounding campus includes a pier for canoeing, kayaking, and fishing, as well as trails and a growing bird sanctuary. The location of the Campus and restoration project is conducive to environmental education from both local and national perspectives as it is located on the Middle Branch of the Patapsco River, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. Masonville Cove is an approved Baltimore Urban Waters Initiative project and epitomizes the goals of the initiative. In 2013, the MCEEC was named the country's first *Urban Wildlife Refuge Partnership* by the US Fish and Wildlife Service. All MCEEC programs addressed within this proposal are directly managed by Lorraine Warnick, Director of the MCEEC. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. All programs described within this application will take place at the MCEEC or within selected Baltimore City public elementary schools.

Living Classrooms Foundation partners with several local organizations and other providers of environmental education in Baltimore. The MCEEC was developed through a partnership between LCF, the Maryland Port Administration (MPA), the National Aquarium, and the Maryland Environmental Services (MES) in order to mitigate the effects of the creation of the Masonville Dredged Materials Containment Facility, which is located adjacent to the MCEEC. Together these organizations work together to manage the MCEEC, which acts as a gateway to connect underserved individuals and communities to the outdoors and the Chesapeake Bay through environmental education, stewardship activities, and job training programs. Living Classrooms is implementing coordinated school and community outreach programs for the local communities, including Brooklyn, Curtis Bay, Westport, and Cherry Hill. This programming is based on Living Classrooms' successful Meaningful Watershed Environmental Education program, which works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards. As students living near the Middle Branch learn about and help to improve their own neighborhoods, they will become the community's future leaders. All MCEEC programs are conducted in partnership with the Baltimore City Public School System, which endorses and supports these efforts through assistance with curricular alignment, school selection, and teacher professional development.

ii. Summary. Living Classrooms Foundation is not currently receiving, nor has it previously received funding from the EPA's EE Grant Program for the programming proposed within this application. However, Living Classrooms did receive an EPA EE Grant for a different program in 2004, the C2K Bay STAR program, which funded restoration of a local wetland by 4th-8th grade students and their teachers. Living Classrooms also received an EPA EE grant in 1997 for the Chesapeake Little Sheds Nitrate Net program, which is also not related to the MCEEC programs.

The environmental literacy programs at MCEEC that are addressed within this proposal create behavioral change as they benefit the environment because they offer engaging hands-on activities that bring students and community members in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings. LCF has been offering successful and replicable hands-on Meaningful Watershed and Environmental Education programs in urban settings for school aged youth and the community for the past two decades. Our experience has shown that one of the most effective ways of engaging underserved communities is by reaching the children in local schools. The ultimate goal of our environmental education programs is to help connect students with their local environment and teach them to care about it, which creates behavioral change in relation to both the environment and education.

The programs offered at MCEEC could be replicable in many other urban waterfront settings that are located within the Chesapeake region or elsewhere. MCEEC educators regularly attend the annual MAEOE (Maryland Association of Environmental and Outdoor Educators) conference to share information about environmental literacy programs. Additionally, the website for our SLURRP program (described in detail below) has been a successful means of sharing data and information and has been used by teachers all around the country.

The proposed program will include two components: 1) involvement of three new underserved Baltimore City Public Schools in a meaningful environmental education program called SLURRP (School Leadership in Urban Runoff Reduction Project), and 2) Community Engagement events that include weekend environmental education programming for children and families, evening presentations for adults, weekly on-site guided walks, a Spring Environmental Festival, and projects with a local senior center that has expressed an interest in participating in volunteer programs at the MCEEC. Goals and objectives of these components are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the entire community, provide an awareness of land use and local environmental issues, provide increased awareness of the MCEEC as a new community resource, and to create behavioral change in regards to both education and environmental literacy. Ultimately, program activities will result in a measurable reduction of runoff pollution in the community, therefore helping to restore the Patapsco River watershed. Academically, school students will exhibit increases in achievement as they complete activities that align with Maryland Common Core State Standards and Next Generation Science Standards.

The programs described within this application meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities that focus on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused areas of the Maryland Environmental Literacy Standards, Common Core Standards, and Next Generation Science Standards. Community programs educate local residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, recycling, and water conservation, among others. MCEEC gives these residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural and beautiful recreation area once again if proper environmental actions are taken and maintained. MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in education programs for children and families, and stewardship activities including shoreline plantings and community clean-up days. The project also addresses EPA Environmental Priority 4 (Protecting Water) and links to EPA's Strategic Plan Goal 2 (Protecting America's Waters), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has been designated as part of the Urban Waters Federal Partnership, and has previously been identified by the Maryland Department of the Environment as having high levels of phosphorous and other contaminants.

iii. Implementation: MCEEC programs are implemented through educational outreach lessons in local schools, hands-on field trips (land-based and onboard ships) for local school youth, on-site weekend programs for youth and families, community events and workshops, and both on-site and outreach programs to a local senior center.

iv. Audience: The proposed programming will serve a variety of audiences from the South Baltimore area surrounding the Masonville Campus. According to the 2011 Neighborhood Health Profile (Baltimore City Health Department, December 2011) these neighborhoods are primarily comprised of the following ethnic groups: White

(52.1%), African American (36.5%), and Hispanic or Latino (9.8%). These communities have many challenges. The median household income in the area ($32,296) is less than that of Baltimore City overall ($37,395), and 19.7% of area families have an income below the poverty level (as compared to 15.2% in Baltimore City overall). The unemployment rate is 9.7% and more than 75% of residents have attained only a high school degree or less. The largest number to be served through this project will be 3rd, 4th, and 5th grade students from Title I public schools in South Baltimore (approximately 600 students over the 2014-15 school year). These youth attend poorly performing urban schools and have limited opportunities for environmental education or field trips. Many are minorities and come from low-income families with parents who did not grow up with an understanding of protecting the environment for future generations, and as a result have not taught their children to do so. Our other audiences will be community members, including toddlers, children and families who attend weekend programs; adults of all ages who attend community talks and events; and senior citizen participants from the local Curtis Bay Rec Center.

v. Costs: The types of expenses that will be requested from this grant include salaries, fringe benefits, indirect costs, and the required sub-awards to other organizations.

(b) Project Description

i. What: 1) MCEEC environmental education programs primarily address the EPA's second educational priority (Educational Advancement) by providing hands-on formal environmental literacy programs to students that advances their knowledge of environmental science and issues and aligns with Maryland's new Common Core educational standards and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that meets state and local academic standards, supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. The MCEEC programs also address Priority 3 (Community Projects) by using interactive stewardship activities as a hook to attract diverse audiences, including local senior citizens, to the center for environmental programming, and by providing hands-on education programs on the weekends for young children to give them an early start on environmental awareness, education, and stewardship.

2) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water: A Precious Limited Resource). The Patapsco River is an important tributary to the Chesapeake Bay, and its deep water port was the catalyst for the development of Baltimore as a major shipbuilding port city that became increasingly industrialized for over two centuries. With this industrialization came significant amounts of pollution, which continue to be a problem in the river today. In 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Masonville Cove is an approved Baltimore Urban Waters Initiative Project and epitomizes the goals of the Urban Waters Initiative. One of the goals of programming at the MCEEC is to reduce storm water runoff pollution in the Patapsco watershed along the south side of the Middle Branch. Activities at MCEEC align with other initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning up the harbor so that it is swimmable and fishable by 2020.

3) The goals of environmental education programming at MCEEC include the following: To provide Meaningful Watershed Educational Experiences for approximately 600 Baltimore City students in 2014-15, to enhance students' academic achievement through administration of periodic, standards-based assessments that will identify areas of need and shape classroom instruction, to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

These programs are easily replicable in other urban waterfront communities. MCEEC educators regularly attend the annual MAEOE (Maryland Association of Environmental and Outdoor Educators) conference to share information about environmental education programs. As an officially designated MAEOE Green Center, the MCEEC is required to share information and assist schools and other locations in their efforts to attain Green

School or Green Center status. The SLURRP website has been a successful means of sharing data and information on the project and it has been used by teachers all around the country. Our community programs are reaching out to diverse audiences, from toddlers to senior citizens, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because these are the people who live in this community, and therefore, ultimately hold a responsibility for keeping it clean and reducing their own negative actions that harm the environment.

4) Over the past 27 years, Living Classrooms Foundation has provided hands-on environmental education programs that have successfully encouraged youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each program offered at the MCEEC address small ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue (storm water runoff), to think about how their personal actions can affect this problem, and to seek solutions that they can implement. Through monthly interactions that build from preparation phase, to action phase, and reflection phase, students experience a sustained and meaningful experience that they remember and carry with them throughout nine months of the year, and hopefully for the rest of their lives. By learning about and helping to improve their own neighborhoods, students will become leaders and may develop a change in attitude that will grow into a life-long community stewardship.

ii. Why: Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. A portion of the 1.2 square mile watershed lies within Anne Arundel County, but the majority of the drainage area can be found within the city limits. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project and epitomizes the goals of the Urban Waters Initiative.

In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. We will work to address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. Area citizens have now initiated a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. Recently, the Maryland Port Administration (MPA) joined community efforts by funding the Masonville Cove restoration project. Over 60,000 tons of debris has been removed including old appliances, tires, construction waste, and rubble. In addition to the clean-up effort, the MPA provided seed funding for the Masonville Cove Environmental Education Campus, where Living Classrooms Foundation instructors design and implement environmental education programs for South Baltimore students and residents. This Urban Wilderness site, which includes 54 acres of land and 70 acres of water, is the first public waterfront access for residents of Brooklyn and Curtis Bay in generations.

Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating Meaningful Watershed Educational Experiences in Baltimore City. Urban schools often must travel outside their communities to find these Bay-related experiences, and students sometimes have difficulty connecting these experiences with their day-to-day existence in the urban setting. Additionally, Baltimore City schools are often financially challenged and burdened with large class sizes, making many outdoor experiences difficult or unattainable. Teachers often struggle to implement the required curriculum and do not have the time or resources to involve students in projects that are perceived as "extra."

We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants have the opportunity to be directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments.

iii. How: This project will include implementation of several key programs that make up the MCEEC's overall education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for three Baltimore City schools who have not previously participated in the program; and 2) Community Engagement events, which include weekend hands-on environmental literacy programs for children and families, outreach and on-site programming with a local senior center, evening programs geared towards local adults, and community clean-up days and events.

1) SLURRP: This innovative program has been providing hands-on environmental education to Baltimore City youth since 2002. Currently we are serving 10 schools, but this grant would allow us to expand our reach to three new underserved city schools. This project-based learning experience was created specifically for Baltimore City students and the largely impervious environment in which they live. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. MCEEC instructors visit each school once a month to engage students on the project's central question, "What is storm water runoff pollution, and how can we help prevent it?" SLURRP is designed to be a complete, yearlong project in which students seek to investigate the issue of storm water runoff pollution through critical thinking, observation, and the collection of data. SLURRP also includes integrated professional development for teachers, targeting critical connections between environmental science, reading, writing, and math.

SLURRP's preparation phase consists of three outreach lessons:

Outreach #1: The first SLURRP outreach program, entitled "What is a Watershed / Runoff?" was designed to be a basic introduction to the project that helps students access prior knowledge about the Bay and build an understanding of SLURRP concepts. This lesson includes an interactive Power Point presentation with images from Google Earth that helps students geographically relate to the Chesapeake Bay. Students also participate in an interactive Ecoscape watershed/runoff model in which they are given a bag of objects labeled industry, agriculture, people, transportation, and housing/development. Students are asked to brainstorm ways that the objects cause pollution. Students then review the different types of runoff pollution and how they might get to the Chesapeake Bay through natural and man-made paths. Key vocabulary is introduced and used throughout the lessons, and students complete two Frayer Models (vocabulary graphic organizers.) Students also complete an entry in their SLURRP journals, which are used in each outreach. At the conclusion of the first program, teachers are left with follow-up materials that include reading about the water cycle and a worksheet for each student.

Outreach #2: The second SLURRP outreach program, entitled "Runoff and Storm Drains" was designed to continue the "preparation phase" of the project by building upon the concepts presented in the first outreach. Students view an interactive Power Point presentation and engage in a discussion about how storm drains differ from sewers. Students also map the slopes of their schoolyard using GPS units and balls to represent runoff. By rolling the balls, students discover what path the water takes to get to the storm drains and what might lie in the water's path. Throughout the lesson, students complete worksheets, construct Frayer Models, and make entries in their SLURRP journals.

Outreach #3: During the third SLURRP outreach entitled, "What's Going Down the Drain?" students use microscopes to examine some of the particulates that are being washed off different locations of their schoolyards. Students compare schoolyard samples with a sample of water from the Masonville Cove outfall. Main concepts and vocabulary include sediment, parts of a microscope, and water quality. Students complete a vocabulary graphic organizer and make entries in their SLURRP journals.

At the conclusion of the preparation phase, students help to compile a list of action steps that could help reduce the amount of storm water runoff pollution in their neighborhoods. A menu of action steps is made available to each participating school, and each school performs at least three steps most appropriate to their

location, grade level, and curriculum. LCF educators are dedicated to helping schools facilitate all the action steps, and provide the expertise, materials, and resources to implement them. Action steps include:
--*Neighborhood trash reduction*: Through the preparation phase, students come to understand that trash on the city streets will ultimately end up in the Bay or one of its tributaries. To help prevent this, schools regularly participate in neighborhood trash clean-ups. Students collect data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.
--*Storm drain stenciling and community outreach*: Under supervision, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump." Some schools will use water quality monitoring equipment to assess the water flowing into local storm drains, and compare this data with water quality collected at storm drain outfalls. With the help of worksheets, students then create and distribute informational brochures to the residents of the community where the stenciling occurs.
--*LCF Shipboard Education Programs*: Schools can participate in a daylong adventure on one of LCF's historic ships as an integrated part of their SLURRP experience. By sailing down the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. Students will gain an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.
--*Schoolyard Restoration and Greening*: The SLURRP staff, students, teachers, and school administrators will work together to create a multi-year planting design that will result in a functional and aesthetically pleasing green area unique to each school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property.
--*Masonville Cove Environmental Education Center Programs*: Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement, increase environmental literacy, and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC also hosts an annual environmental education festival for the students that attend schools in the South Baltimore communities surrounding Masonville Cove. The festival serves approximately 500 fourth and fifth-grade students with a rotation of stations, each with an environmental theme directly relating to Masonville Cove and the local watershed. These 25-minute stations are staffed with volunteers from environmental organizations such as the Department of Natural Resources, National Oceanic and Atmospheric Administration (NOAA), Maryland Environmental Service, Anita C. Leight Estuary Center, North Bay, St. George's Garden Club and M&T Bank, Marshy Point Nature Center, Filbert Street Community Garden, and University of Maryland Cooperative Extension.

The reflection phase of the project takes place near the end of the school year, after each school has completed their action steps. The reflection phase takes place via SLURRP public awareness activities, in which each class must devise a method of informing the rest of their school and the general public about storm water runoff issues and how to help. Posters, songs, stories, brochures, video commercials, websites, and informational flyers are encouraged.

In addition to the student programs, SLURRP delivers long-term, integrated, professional development for teachers. This professional development familiarizes teachers with the SLURRP environmental science content, helps them make connections between this content and other academic areas, helps them reinforce academic instruction in the areas of student need, and strengthens the continuity of student programs throughout the year. Consultants from the educational and environmental communities are involved, and the workshops target connections between SLURRP, environmental science, reading, and math, and how teachers can best make these links in their classrooms.

Through monthly interactions that build from preparation phase, to action phase, and reflection phase, students and teachers experience a sustained and meaningful experience that they remember and carry with them throughout nine months of the year, and hopefully for the rest of their lives. By learning about and helping to improve their own neighborhoods, students will become leaders and may develop a change in attitude that will grow into a life-long community stewardship.
2) Community Engagement: LCF will plan, develop, and implement community education and recreation events for residents of the South Baltimore neighborhoods of Brooklyn, Curtis Bay, Westport, and Cherry Hill, and the wider area. Community Education Coordinators will plan, advertise, conduct, and track an average of five community

education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with partner organizations to create new opportunities for community participation on the Masonville Cove Campus, while maintaining requirements for MCEEC's Green Center certification from Maryland Association of Environmental and Outdoor Education (MAEOE.)

The weekend programs for younger children and their families include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban communities and encourage them to take part in the free community activities that are offered. In addition, Guided Walks with a Maryland Master Naturalist are offered once a week to the community, weather permitting. In the coming year, we will be working with local senior citizens from the Curtis Bay Rec Center to develop volunteer opportunities and outreach programs at the request of the center's participants, many of whom remember the days decades ago when Masonville Cove was an active fishing and recreation site.

Finally, the MCEEC will host shoreline clean-up events in the spring and fall. These bi-annual clean-ups will include volunteers from the community and a local high school. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to accurately record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, foamed plastic, wood, etc); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change throughout the years.

Sub-Awards

Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing four sub-grantees who will use each of the $4,688 grants for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and also work to improve the Patapsco watershed in the vicinity of the MCEEC. We are considering a grant to the National Aquarium Conservation Team, who will conduct community shoreline plantings that expand the wetlands shrubs along the water's edge at the MCEEC to help stabilize the 5,040 square feet of shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for schools to utilize buses for field trips to MCEEC, since transportation expenses are a major factor for inner city schools not being able to afford student trips. And finally we will approach a local high school about a sub-grant award that will allow students and teachers to fund an age appropriate environmental project in the community. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals and objectives of increasing environmental literacy. MCEEC staff will provide oversight on projects conducted by the sub-grantees to ensure that they achieve the project's expected outputs and outcomes. Prospective grantees will be asked to complete essays describing the goals and objectives of their projects and how they align with the EPA's goals and objectives.

iv. Who: Through this funding request, we are anticipating recruiting three new underserved Baltimore City schools to participate in a year of programming at MCEEC (July 2014- June 2015). The schools to be selected will be Title I schools in low-income, primarily minority communities in South Baltimore. Participating students will be in 3rd, 4th and/or 5th grades. MCEEC staff will request a meeting with school administration and introduce the no-cost program designed to increase Maryland School Assessment scores, then, if given a favorable response, will work

with teachers to develop a schedule. We have found that schools are generally eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation with City schools over the last decade.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community as well as promoting special community events for all ages. We are also planning to begin a partnership with the Curtis Bay Senior Citizens group at the local Curtis Bay Rec Center, and host on-site and outreach programs for this group of residents who have not previously been served by MCEEC programming. In fact, participants with the senior center recently contacted MCEEC to ask about opportunities to learn and volunteer, and this will be an excellent opportunity to bring them into our programming and serve a new audience.

(c). Project Evaluation

SLURRP is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, introduction to MCEEC as a new community resource, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues.

The educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student academic achievement in the content area and target instruction of SLURRP. The program will measure increases in student academic achievement as they complete activities that align with Maryland Common Core State Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about storm water runoff prevention and environmental stewardship. Teachers will be asked to complete feedback forms after every aspect of the program to evaluate academic and social impact on their students, on the effectiveness of the collaboration, and to provide direction for future efforts. Results of the surveys will be compiled and compared to determine the impact of the program on participants. The success of the project will be further assessed by the number of students and teachers participating, the number of storm drains stenciled, and the amount of trash collected by weight.

Participants in community events will be asked to complete pre- and post-event surveys reflecting what they have learned and if their attitude toward environmental issues in their community has changed. MCEEC will also record the number of participants at each event.

Appendices

Appendix 5(a): EPA EE Grant
Timeline and Milestones

June 2014 – June 2015

July 2014
- Acceptance of award
- Correspondence with BCPSS about selection of three new participating schools
- Correspondence with potential new schools
- Begin selection of subgrantees
- MCEEC weekend community education programs

August 2014
- Continued correspondence with BCPSS about selection of new schools
- Continued correspondence with potential new schools
- Continue subgrantee selection
- MCEEC weekend community education programs

September 2014
- Finalize selection of new schools
- Have pre-program meeting with principals and teachers
- Create year-long programming schedule for each school
- Continue subgrantee selection
- MCEEC weekend community education programs

September/October 2014
- Teacher professional development workshop
- Conduct student pre-program assessment and survey
- Begin preparation phase programming
- Begin tallying teacher feedback forms for each program
- Subgrant award for high school partnership projects
- Subgrant award for buses
- Begin school field programs at MCEEC
- MCEEC weekend community education programs

November/December 2014
- Continue preparation phase programming
- School field programs at MCEEC
- Shoreline clean-up event at MCEEC
- MCEEC weekend community education programs

January/February 2015
- Complete preparation phase programming, prepare for action phase programming
- Mid-year student assessment and survey
- School field programs at MCEEC
- Teacher professional development workshop
- MCEEC weekend community education programs

March/April 2015
- Action phase programming
- School field programs at MCEEC

- Subgrant award for shoreline planting projects
- Subgrant award for native plants and restoration projects
- MCEEC Environmental Festival
- MCEEC weekend community education programs

May/June 2015

- Reflection phase programming
- Conduct student post-program assessment and survey
- Tally all survey and feedback form results
- Conduct end-of-year meeting with teachers
- Shoreline clean-up event at MCEEC
- MCEEC weekend community education programs

Funding controls: Living Classrooms Foundation has an experienced accounting department that works closely with program directors to ensure that awarded grant funds are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

Appendix 5(b): EPA EE Grant
Logic Model

Outputs	Outcomes		
	Short-term	**Medium-term**	**Long-term**
Management & implementation of education programs in schools and MCEEC	SLURRP outreach programs and MCEEC field experiences for 3 new schools Collection of trash Storm drains stenciled	Continued outreach to schools Spring Festival at MCEEC Continued reduction of trash in community More storm drains stenciled	Improved environmental literacy and knowledge of storm water runoff issues Change in attitudes regarding pollution Increased attitude of environmental stewardship Significant decrease in trash & runoff pollution in schoolyards and neighborhoods resulting in improved water quality Increase in student achievement through targeted instruction
Planning and implementation of community education programs at MCEEC	Community education programs at MCEEC operate on regular schedule	Increased participation in community events at MCEEC Spring Festival at MCEEC	Increased community awareness of local land use and environmental issues Increased environmental stewardship Increased community visitation to MCEEC as a community resource
Field trips	Field trips to MCEEC	Improved knowledge of local environmental issues and potential action steps towards solutions	Change in attitudes regarding pollution Increased attitude of environmental stewardship Increase in student

			achievement through targeted instruction
Promote Programs and Events at MCEEC	Creation of brochures and banners	Distribution of brochures; regular updates to SLURRP website	Increased attendance at community events
Sub-grants to partnering entities	Determine subgrantees Creating partnerships to further the environmental education goals	Shoreline planting projects Native plantings and restoration projects Buses for transporting students to MCEEC programs High school partnership projects	Improved environmental literacy and knowledge of urban environmental issues Change in attitudes regarding pollution Increased environmental stewardship Increased wetland and native plant habitat resulting in improved water quality

Appendix 5(c): Programmatic Capability and Past Performance

Over the past 25 years, Living Classrooms Foundation has received countless federally funded assistance agreements from such diverse agencies as the United States Departments of Education, Labor, Health and Human Services, and Interior; the National Science Foundation; and NOAA. Living Classrooms has also received previous EPA grants, in 1997 and 2004. The projects that resulted from all of these funding agreements were successful, completed within the proposed time frame, and reported on within the required parameters of each individual agreement. Within the past three years, the most relevant project that is similar in size and scope that has been completed with a federal funding agreement is a grant from NOAA's B-WET environmental education program for the SLURRP initiative referenced in this application. Living Classrooms Foundation has received a continuous series of these NOAA grants since the inception of B-WET in 2002. The most recent of these was a 3-year grant awarded in 2012 ($120,000 per year, $360,000 total). Year 1 took place from July 2012 - June 2013, and we completed all goals and reporting. We are currently in Year 2 of the grant (July 2013 - June 2014). LCF has competently executed the activities funded by all of these grant agreements, met the stated objectives of the agreements, and is on a timely track to meet the objectives of our current NOAA agreement. We have punctually reported on the achievement of program outcomes and outputs for each of our federally funded grants. Reports to NOAA have been submitted in a timely fashion according to the schedule presented in the grant agreements.

Living Classrooms Foundation has a long history of completing projects and achieving the stated goals of each. We have an excellent reputation for yielding quality results and adhering to the requirements of grants and agreements from diverse funding streams, both government and private sector.

Living Classrooms Foundation was established in Baltimore, Maryland in 1985. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 40,000 students a year enrolled in diverse programs that take place on Living Classrooms' campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships. For 28 years, Living Classrooms has been a leader in education, workforce development, and positive social change in the Baltimore-Washington region, earning local and national recognition for our results. Living Classrooms Foundation addresses head-on some of the most challenging issues affecting disadvantaged children and young adults, and believes that every student, even those residing in distressed communities, can reach his or her potential if provided a continuum of resources and quality programming that is effective and structured.

In 2009, LCF joined with the Maryland Port Administration (MPA) to become the lead educational and operational partner of the Masonville Cove Environmental Education Center (MCEEC), a unique, urban nature facility located along the Patapsco River's Middle Branch. The Center currently includes a "green" building with science labs, over 50 acres of land, 70 acres of water, picnic areas, a bird sanctuary, hiking trails, a pier, and several tidal and non-tidal wetland projects. Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC hosts the annual Masonville Cove Environmental Festival, and has become a hub where SLURRP schools can learn more about the nature of their urban environment while participating in various restoration projects. To date, MCEEC has served 8,100 students and 330 teachers with educational outreach and community environmental programming, and in 2013, the site was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

LCF has been very successful in operating educational programs and schools as well. In 2013, The Crossroads School (a Baltimore City charter middle school operated by Living Classrooms) was the top scoring City middle school (6-8) on the 8th grade Maryland School Assessments (MSA) in both Reading and Math. Living Classrooms also manages Commodore John Rodgers, a Baltimore City elementary/middle school that was selected as a "turn-around" school in 2010 due to poor academic performance; Living Classrooms staff has not only led this to becoming the top performing turn-around school, but it has also become competitive with the City's higher performing schools on MSA exams, as well as becoming a national model school.

Living Classrooms Foundation currently operates on an annual $14 million budget. The Foundation has a long track record of compliance and fiscal responsibility with federal, state, local, corporate and foundation grants ranging up to and over $1,000,000. Major sources of funding have come from the Harry and Jeanette Weinberg Foundation, the W.K. Kellogg Foundation, the Steve and Renee Bisciotti Foundation, the Cal Ripken Sr. Foundation,

the Open Society Institute, Under Armour, and Constellation Energy. Living Classrooms Foundation also receives funding from the US Departments of Labor, Education, Health and Human Services, and Interior; the State of Maryland; and City of Baltimore.

Living Classrooms Foundation is operated by a permanent staff of 300; this number grows to over 400 during summer programs. Leadership is provided by James Piper Bond, President and CEO, Nicole Ruocco-CFO, Thara Taylor-Director of Development and Communications, Talib Horne-Vice President for Community Development, Bill Cunningham-Vice President for Government Relations, Steve Bountress-Vice President for Workforce Development, Scott Raymond-Vice President for Education, and Christopher Rowsom-Vice President for Maritime Heritage Programs. These staff members have been with Living Classrooms for periods ranging from six to twenty-six years with one exception--CFO Nicole Ruocco joined the staff in 2013.

Key staff members that are directly involved in directing and implementing the environmental education programming at MCEEC are Christine Truett, LCF's Director of Education; Lorraine Warnick, Director of the MCEEC, and Amie McDaniels, Education Supervisor at MCEEC. Ms. Truett has worked with Living Classrooms Foundation for 21 years, starting as a shipboard environmental educator, and moving up to Assistant Director of Education and later Director of Education, a position she has held since 2000. Ms. Truett holds a BS in biology from Mary Washington College. She has extensive experience in directing environmental education programs, including oversight of environmental education programming at MCEEC, and has an excellent track record of successfully operating programs using federal, state, and private funding.

Ms. Warnick also began working at Living Classrooms Foundation as a shipboard educator in 1997. She has since been a Program Director, Director of Environmental Education, and in 2009 became the Director of the MCEEC. Ms. Warnick holds a BS in Biological Sciences from the University of Maryland, and a MS in Environmental Science and Policy from Johns Hopkins University. She is responsible for the oversight of the programs discussed within this application, and has extensive experience implementing grants, managing budgets, grant reporting, and program evaluation.

The lead educator for the school and community programs at MCEEC is Ms. Amie McDaniels. Ms. McDaniels holds a Bachelor's Degree in Interdisciplinary Studies/Urban Environmental Education and an Elementary Education Certificate for Grades 1-6, both from University of Maryland, Baltimore County. She has been the Education Supervisor at MCEEC since June 2012, and implements school and community programs in alignment with Maryland State Curriculum, Common Core, and Environmental Literacy standards, coordinates programs and field trips, and trains volunteers and interns in the best practices of environmental education. Ms. McDaniels was previously a STEM teacher at Violetville School in Baltimore City, and also continues to work as a Naturalist at the Marshy Point Nature Center in Middle River, Maryland. She has experience with providing environmental education to inner city youth in underserved communities. All of the staff members that she oversees are well trained to effectively provide SLURRP and other community programs in such a way that they have maximum impact on the participants. If granted an EPA EE grant, LCF will use a portion of the funding to hire an additional SLURRP educator to serve the four new schools that will participate in the program.

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 3rd ✓ * b. Program/Project: 2nd ✓

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/01/2014 ✓ * b. End Date: 09/01/2015 ✓

18. Estimated Funding ($):

* a. Federal	75,000.00
* b. Applicant	58,821.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	133,821.00 ✓

56.05
43.95

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	Mr.
* First Name:	James
Middle Name:	Piper
* Last Name:	Bond
Suffix:	
* Title:	President & CEO
* Telephone Number:	410-685-0295
Fax Number:	410-276-6347
* Email:	james@livingclassrooms.org
* Signature of Authorized Representative:	James P Bond
* Date Signed:	8/1/2014 ✓

Rec'd 8/4/14

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 06/30/2014

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Environmental Education Grants	66.951	$ 0.00	$ 0.00	$ 75,000.00	$ 58,821.00	$ 133,821.00
2.						
3.						
4.						
5. Totals		$	$	$ 75,000.00	$ 58,821.00	$ 133,821.00

Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1

OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 02/03/2014

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Living Classrooms Foundation

* b. Employer/Taxpayer Identification Number (EIN/TIN): 52-1369524

* c. Organizational DUNS: 6061037600000

d. Address:

* Street1: 802 South Caroline Street
Street2:
* City: Baltimore
County/Parish:
* State: MD: Maryland
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 21231-2331

e. Organizational Unit:

Department Name: Education

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Ms.
* First Name: Christine
Middle Name:
* Last Name: Truett
Suffix:

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number: 410-685-0295
Fax Number: 410-752-8433

* Email: christine@livingclassrooms.org

Disregard

F = 100,000
A = 70,793
170,793

GRANTS.GOV

Grant Application Package

Opportunity Title:	Environmental Education Model Grants -- Solicitation No
Offering Agency:	Environmental Protection Agency
CFDA Number:	66.951
CFDA Description:	Environmental Education Grants
Opportunity Number:	EPA-EE-13-01
Competition ID:	
Opportunity Open Date:	12/09/2013
Opportunity Close Date:	02/04/2014
Agency Contact:	Ginger Potter EEgrants@epa.gov

This opportunity is only open to organizations, applicants who are submitting grant applications on behalf of a company, state, local or tribal government, academia, or other type of organization.

Application Filing Name: Living Classrooms Foundation

Select Forms to Complete

Mandatory

Application for Federal Assistance (SF-424)

Project Narrative Attachment Form

Budget Information for Non-Construction Programs (SF-424A)

Optional

☒ Other Attachments Form

Instructions

Show Instructions >>

This electronic grants application is intended to be used to apply for the specific Federal funding opportunity referenced here.

If the Federal funding opportunity listed is not the opportunity for which you want to apply, close this application package by clicking on the "Cancel" button at the top of this screen. You will then need to locate the correct Federal funding opportunity, download its application and then apply.

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.951

CFDA Title:

Environmental Education Grants

*** 12. Funding Opportunity Number:**

EPA-EE-13-01

* Title:

Environmental Education Model Grants -- Solicitation Notice for 2013

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Masonville Cove Environmental Education Center Programming

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

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* a. Applicant: 3rd
* b. Program/Project: 2nd

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* f. Program Income	0.00	
* g. TOTAL	133,821.00	✓

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If "Yes", provide explanation and attach

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Authorized Representative:

Prefix:	Mr.
* First Name:	James
Middle Name:	Piper
* Last Name:	Bond
Suffix:	
* Title:	President & CEO
* Telephone Number:	410-685-0295
Fax Number:	410-276-6347
* Email:	james@livingclassrooms.org
* Signature of Authorized Representative:	Analeigh Smith
* Date Signed:	02/03/2014

3. Work Plan.

(a) Project Summary

i. Organization and Partnerships: Living Classrooms Foundation (LCF) is a non-profit educational organization, headquartered in Baltimore, MD, with a distinctive competency in experiential learning - literally learning by direct experience, or "learning by doing." LCF strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 25 years, Living Classrooms has provided meaningful learning experiences with academic and real-world implications to a wide variety of audiences, with a special emphasis on serving at-risk youth. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 40,000 students a year enrolled in diverse programs that take place on our campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships.

Recently, our environmental education and shipboard programs have expanded to serve greater numbers of Baltimore's youth with the opening of the Masonville Cove Environmental Education Campus in South Baltimore. Living Classrooms Foundation leads school-based and community environmental education programs at the MCEEC, which is located at 1000 Frankfurst Avenue, Baltimore, MD 21226 (EPA Region 3). The Masonville Cove Environmental Education Center (MCEEC) building opened in April 2009. This near "net-zero" energy "green building" serves as a hub for Living Classrooms' school-based educational programs, environmental activities centered on the revitalized Masonville Cove shoreline, and myriad community events. The building features two state-of-the-art science labs for students, interactive kiosks, aquarium tanks filled with native creatures, and a great room for meetings. The surrounding campus includes a pier for canoeing, kayaking, and fishing, as well as trails and a growing bird sanctuary. The location of the Campus and restoration project is conducive to environmental education from both local and national perspectives as it is located on the Middle Branch of the Patapsco River, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. Masonville Cove is an approved Baltimore Urban Waters Initiative project and epitomizes the goals of the initiative. In 2013, the MCEEC was named the country's first *Urban Wildlife Refuge Partnership* by the US Fish and Wildlife Service. All MCEEC programs addressed within this proposal are directly managed by Lorraine Warnick, Director of the MCEEC. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. All programs described within this application will take place at the MCEEC or within selected Baltimore City public elementary schools.

Living Classrooms Foundation partners with several local organizations and other providers of environmental education in Baltimore. The MCEEC was developed through a partnership between LCF, the Maryland Port Administration (MPA), the National Aquarium, and the Maryland Environmental Services (MES) in order to mitigate the effects of the creation of the Masonville Dredged Materials Containment Facility, which is located adjacent to the MCEEC. Together these organizations work together to manage the MCEEC, which acts as a gateway to connect underserved individuals and communities to the outdoors and the Chesapeake Bay through environmental education, stewardship activities, and job training programs. Living Classrooms is implementing coordinated school and community outreach programs for the local communities, including Brooklyn, Curtis Bay, Westport, and Cherry Hill. This programming is based on Living Classrooms' successful Meaningful Watershed Environmental Education program, which works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards. As students living near the Middle Branch learn about and help to improve their own neighborhoods, they will become the community's future leaders. All MCEEC programs are conducted in partnership with the Baltimore City Public School System, which endorses and supports these efforts through assistance with curricular alignment, school selection, and teacher professional development.

ii. Summary. Living Classrooms Foundation is not currently receiving, nor has it previously received funding from the EPA's EE Grant Program for the programming proposed within this application. However, Living Classrooms did receive an EPA EE Grant for a different program in 2004, the C2K Bay STAR program, which funded restoration of a local wetland by 4th-8th grade students and their teachers. Living Classrooms also received an EPA EE grant in 1997 for the Chesapeake Little Sheds Nitrate Net program, which is also not related to the MCEEC programs.

The environmental literacy programs at MCEEC that are addressed within this proposal create behavioral change as they benefit the environment because they offer engaging hands-on activities that bring students and community members in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings. LCF has been offering successful and replicable hands-on Meaningful Watershed and Environmental Education programs in urban settings for school aged youth and the community for the past two decades. Our experience has shown that one of the most effective ways of engaging underserved communities is by reaching the children in local schools. The ultimate goal of our environmental education programs is to help connect students with their local environment and teach them to care about it, which creates behavioral change in relation to both the environment and education.

The programs offered at MCEEC could be replicable in many other urban waterfront settings that are located within the Chesapeake region or elsewhere. MCEEC educators regularly attend the annual MAEOE (Maryland Association of Environmental and Outdoor Educators) conference to share information about environmental literacy programs. Additionally, the website for our SLURRP program (described in detail below) has been a successful means of sharing data and information and has been used by teachers all around the country.

The proposed program will include two components: 1) involvement of three new underserved Baltimore City Public Schools in a meaningful environmental education program called SLURRP (School Leadership in Urban Runoff Reduction Project), and 2) Community Engagement events that include weekend environmental education programming for children and families, evening presentations for adults, weekly on-site guided walks, a Spring Environmental Festival, and projects with a local senior center that has expressed an interest in participating in volunteer programs at the MCEEC. Goals and objectives of these components are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the entire community, provide an awareness of land use and local environmental issues, provide increased awareness of the MCEEC as a new community resource, and to create behavioral change in regards to both education and environmental literacy. Ultimately, program activities will result in a measurable reduction of runoff pollution in the community, therefore helping to restore the Patapsco River watershed. Academically, school students will exhibit increases in achievement as they complete activities that align with Maryland Common Core State Standards and Next Generation Science Standards.

The programs described within this application meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities that focus on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused areas of the Maryland Environmental Literacy Standards, Common Core Standards, and Next Generation Science Standards. Community programs educate local residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, recycling, and water conservation, among others. MCEEC gives these residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural and beautiful recreation area once again if proper environmental actions are taken and maintained. MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in education programs for children and families, and stewardship activities including shoreline plantings and community clean-up days. The project also addresses EPA Environmental Priority 4 (Protecting Water) and links to EPA's Strategic Plan Goal 2 (Protecting America's Waters), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has been designated as part of the Urban Waters Federal Partnership, and has previously been identified by the Maryland Department of the Environment as having high levels of phosphorous and other contaminants.

iii. Implementation: MCEEC programs are implemented through educational outreach lessons in local schools, hands-on field trips (land-based and onboard ships) for local school youth, on-site weekend programs for youth and families, community events and workshops, and both on-site and outreach programs to a local senior center.

iv. Audience: The proposed programming will serve a variety of audiences from the South Baltimore area surrounding the Masonville Campus. According to the 2011 Neighborhood Health Profile (Baltimore City Health Department, December 2011) these neighborhoods are primarily comprised of the following ethnic groups: White

(52.1%), African American (36.5%), and Hispanic or Latino (9.8%). These communities have many challenges. The median household income in the area ($32,296) is less than that of Baltimore City overall ($37,395), and 19.7% of area families have an income below the poverty level (as compared to 15.2% in Baltimore City overall). The unemployment rate is 9.7% and more than 75% of residents have attained only a high school degree or less. The largest number to be served through this project will be 3rd, 4th, and 5th grade students from Title I public schools in South Baltimore (approximately 600 students over the 2014-15 school year). These youth attend poorly performing urban schools and have limited opportunities for environmental education or field trips. Many are minorities and come from low-income families with parents who did not grow up with an understanding of protecting the environment for future generations, and as a result have not taught their children to do so. Our other audiences will be community members, including toddlers, children and families who attend weekend programs; adults of all ages who attend community talks and events; and senior citizen participants from the local Curtis Bay Rec Center.

v. Costs: The types of expenses that will be requested from this grant include salaries, fringe benefits, indirect costs, and the required sub-awards to other organizations.

(b) Project Description

i. What: 1) MCEEC environmental education programs primarily address the EPA's second educational priority (Educational Advancement) by providing hands-on formal environmental literacy programs to students that advances their knowledge of environmental science and issues and aligns with Maryland's new Common Core educational standards and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that meets state and local academic standards, supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. The MCEEC programs also address Priority 3 (Community Projects) by using interactive stewardship activities as a hook to attract diverse audiences, including local senior citizens, to the center for environmental programming, and by providing hands-on education programs on the weekends for young children to give them an early start on environmental awareness, education, and stewardship.

2) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water: A Precious Limited Resource). The Patapsco River is an important tributary to the Chesapeake Bay, and its deep water port was the catalyst for the development of Baltimore as a major shipbuilding port city that became increasingly industrialized for over two centuries. With this industrialization came significant amounts of pollution, which continue to be a problem in the river today. In 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Masonville Cove is an approved Baltimore Urban Waters Initiative Project and epitomizes the goals of the Urban Waters Initiative. One of the goals of programming at the MCEEC is to reduce storm water runoff pollution in the Patapsco watershed along the south side of the Middle Branch. Activities at MCEEC align with other initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning up the harbor so that it is swimmable and fishable by 2020.

3) The goals of environmental education programming at MCEEC include the following: To provide Meaningful Watershed Educational Experiences for approximately 600 Baltimore City students in 2014-15, to enhance students' academic achievement through administration of periodic, standards-based assessments that will identify areas of need and shape classroom instruction, to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

These programs are easily replicable in other urban waterfront communities. MCEEC educators regularly attend the annual MAEOE (Maryland Association of Environmental and Outdoor Educators) conference to share information about environmental education programs. As an officially designated MAEOE Green Center, the MCEEC is required to share information and assist schools and other locations in their efforts to attain Green

School or Green Center status. The SLURRP website has been a successful means of sharing data and information on the project and it has been used by teachers all around the country. Our community programs are reaching out to diverse audiences, from toddlers to senior citizens, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because these are the people who live in this community, and therefore, ultimately hold a responsibility for keeping it clean and reducing their own negative actions that harm the environment.

4) Over the past 27 years, Living Classrooms Foundation has provided hands-on environmental education programs that have successfully encouraged youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each program offered at the MCEEC address small ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue (storm water runoff), to think about how their personal actions can affect this problem, and to seek solutions that they can implement. Through monthly interactions that build from preparation phase, to action phase, and reflection phase, students experience a sustained and meaningful experience that they remember and carry with them throughout nine months of the year, and hopefully for the rest of their lives. By learning about and helping to improve their own neighborhoods, students will become leaders and may develop a change in attitude that will grow into a life-long community stewardship.

ii. Why: Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. A portion of the 1.2 square mile watershed lies within Anne Arundel County, but the majority of the drainage area can be found within the city limits. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project and epitomizes the goals of the Urban Waters Initiative.

In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. We will work to address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. Area citizens have now initiated a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. Recently, the Maryland Port Administration (MPA) joined community efforts by funding the Masonville Cove restoration project. Over 60,000 tons of debris has been removed including old appliances, tires, construction waste, and rubble. In addition to the clean-up effort, the MPA provided seed funding for the Masonville Cove Environmental Education Campus, where Living Classrooms Foundation instructors design and implement environmental education programs for South Baltimore students and residents. This Urban Wilderness site, which includes 54 acres of land and 70 acres of water, is the first public waterfront access for residents of Brooklyn and Curtis Bay in generations.

Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating Meaningful Watershed Educational Experiences in Baltimore City. Urban schools often must travel outside their communities to find these Bay-related experiences, and students sometimes have difficulty connecting these experiences with their day-to-day existence in the urban setting. Additionally, Baltimore City schools are often financially challenged and burdened with large class sizes, making many outdoor experiences difficult or unattainable. Teachers often struggle to implement the required curriculum and do not have the time or resources to involve students in projects that are perceived as "extra."

We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants have the opportunity to be directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments.

iii. How: This project will include implementation of several key programs that make up the MCEEC's overall education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for three Baltimore City schools who have not previously participated in the program; and 2) Community Engagement events, which include weekend hands-on environmental literacy programs for children and families, outreach and on-site programming with a local senior center, evening programs geared towards local adults, and community clean-up days and events.

1) SLURRP: This innovative program has been providing hands-on environmental education to Baltimore City youth since 2002. Currently we are serving 10 schools, but this grant would allow us to expand our reach to three new underserved city schools. This project-based learning experience was created specifically for Baltimore City students and the largely impervious environment in which they live. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. MCEEC instructors visit each school once a month to engage students on the project's central question, "What is storm water runoff pollution, and how can we help prevent it?" SLURRP is designed to be a complete, yearlong project in which students seek to investigate the issue of storm water runoff pollution through critical thinking, observation, and the collection of data. SLURRP also includes integrated professional development for teachers, targeting critical connections between environmental science, reading, writing, and math.

SLURRP's preparation phase consists of three outreach lessons:

Outreach #1: The first SLURRP outreach program, entitled "What is a Watershed / Runoff?" was designed to be a basic introduction to the project that helps students access prior knowledge about the Bay and build an understanding of SLURRP concepts. This lesson includes an interactive Power Point presentation with images from Google Earth that helps students geographically relate to the Chesapeake Bay. Students also participate in an interactive Ecoscape watershed/runoff model in which they are given a bag of objects labeled industry, agriculture, people, transportation, and housing/development. Students are asked to brainstorm ways that the objects cause pollution. Students then review the different types of runoff pollution and how they might get to the Chesapeake Bay through natural and man-made paths. Key vocabulary is introduced and used throughout the lessons, and students complete two Frayer Models (vocabulary graphic organizers.) Students also complete an entry in their SLURRP journals, which are used in each outreach. At the conclusion of the first program, teachers are left with follow-up materials that include reading about the water cycle and a worksheet for each student.

Outreach #2: The second SLURRP outreach program, entitled "Runoff and Storm Drains" was designed to continue the "preparation phase" of the project by building upon the concepts presented in the first outreach. Students view an interactive Power Point presentation and engage in a discussion about how storm drains differ from sewers. Students also map the slopes of their schoolyard using GPS units and balls to represent runoff. By rolling the balls, students discover what path the water takes to get to the storm drains and what might lie in the water's path. Throughout the lesson, students complete worksheets, construct Frayer Models, and make entries in their SLURRP journals.

Outreach #3: During the third SLURRP outreach entitled, "What's Going Down the Drain?" students use microscopes to examine some of the particulates that are being washed off different locations of their schoolyards. Students compare schoolyard samples with a sample of water from the Masonville Cove outfall. Main concepts and vocabulary include sediment, parts of a microscope, and water quality. Students complete a vocabulary graphic organizer and make entries in their SLURRP journals.

At the conclusion of the preparation phase, students help to compile a list of action steps that could help reduce the amount of storm water runoff pollution in their neighborhoods. A menu of action steps is made available to each participating school, and each school performs at least three steps most appropriate to their

location, grade level, and curriculum. LCF educators are dedicated to helping schools facilitate all the action steps, and provide the expertise, materials, and resources to implement them. Action steps include:
--*Neighborhood trash reduction*: Through the preparation phase, students come to understand that trash on the city streets will ultimately end up in the Bay or one of its tributaries. To help prevent this, schools regularly participate in neighborhood trash clean-ups. Students collect data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.
--*Storm drain stenciling and community outreach*: Under supervision, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump." Some schools will use water quality monitoring equipment to assess the water flowing into local storm drains, and compare this data with water quality collected at storm drain outfalls. With the help of worksheets, students then create and distribute informational brochures to the residents of the community where the stenciling occurs.
--*LCF Shipboard Education Programs*: Schools can participate in a daylong adventure on one of LCF's historic ships as an integrated part of their SLURRP experience. By sailing down the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. Students will gain an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.
--*Schoolyard Restoration and Greening*: The SLURRP staff, students, teachers, and school administrators will work together to create a multi-year planting design that will result in a functional and aesthetically pleasing green area unique to each school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property.
--*Masonville Cove Environmental Education Center Programs*: Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement, increase environmental literacy, and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC also hosts an annual environmental education festival for the students that attend schools in the South Baltimore communities surrounding Masonville Cove. The festival serves approximately 500 fourth and fifth-grade students with a rotation of stations, each with an environmental theme directly relating to Masonville Cove and the local watershed. These 25-minute stations are staffed with volunteers from environmental organizations such as the Department of Natural Resources, National Oceanic and Atmospheric Administration (NOAA), Maryland Environmental Service, Anita C. Leight Estuary Center, North Bay, St. George's Garden Club and M&T Bank, Marshy Point Nature Center, Filbert Street Community Garden, and University of Maryland Cooperative Extension.

The reflection phase of the project takes place near the end of the school year, after each school has completed their action steps. The reflection phase takes place via SLURRP public awareness activities, in which each class must devise a method of informing the rest of their school and the general public about storm water runoff issues and how to help. Posters, songs, stories, brochures, video commercials, websites, and informational flyers are encouraged.

In addition to the student programs, SLURRP delivers long-term, integrated, professional development for teachers. This professional development familiarizes teachers with the SLURRP environmental science content, helps them make connections between this content and other academic areas, helps them reinforce academic instruction in the areas of student need, and strengthens the continuity of student programs throughout the year. Consultants from the educational and environmental communities are involved, and the workshops target connections between SLURRP, environmental science, reading, and math, and how teachers can best make these links in their classrooms.

Through monthly interactions that build from preparation phase, to action phase, and reflection phase, students and teachers experience a sustained and meaningful experience that they remember and carry with them throughout nine months of the year, and hopefully for the rest of their lives. By learning about and helping to improve their own neighborhoods, students will become leaders and may develop a change in attitude that will grow into a life-long community stewardship.
2) Community Engagement: LCF will plan, develop, and implement community education and recreation events for residents of the South Baltimore neighborhoods of Brooklyn, Curtis Bay, Westport, and Cherry Hill, and the wider area. Community Education Coordinators will plan, advertise, conduct, and track an average of five community

education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with partner organizations to create new opportunities for community participation on the Masonville Cove Campus, while maintaining requirements for MCEEC's Green Center certification from Maryland Association of Environmental and Outdoor Education (MAEOE.)

The weekend programs for younger children and their families include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban communities and encourage them to take part in the free community activities that are offered. In addition, Guided Walks with a Maryland Master Naturalist are offered once a week to the community, weather permitting. In the coming year, we will be working with local senior citizens from the Curtis Bay Rec Center to develop volunteer opportunities and outreach programs at the request of the center's participants, many of whom remember the days decades ago when Masonville Cove was an active fishing and recreation site.

Finally, the MCEEC will host shoreline clean-up events in the spring and fall. These bi-annual clean-ups will include volunteers from the community and a local high school. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to accurately record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, foamed plastic, wood, etc); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change throughout the years.

Sub-Awards

Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing four sub-grantees who will use each of the $4,688 grants for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and also work to improve the Patapsco watershed in the vicinity of the MCEEC. We are considering a grant to the National Aquarium Conservation Team, who will conduct community shoreline plantings that expand the wetlands shrubs along the water's edge at the MCEEC to help stabilize the 5,040 square feet of shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for schools to utilize buses for field trips to MCEEC, since transportation expenses are a major factor for inner city schools not being able to afford student trips. And finally we will approach a local high school about a sub-grant award that will allow students and teachers to fund an age appropriate environmental project in the community. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals and objectives of increasing environmental literacy. MCEEC staff will provide oversight on projects conducted by the sub-grantees to ensure that they achieve the project's expected outputs and outcomes. Prospective grantees will be asked to complete essays describing the goals and objectives of their projects and how they align with the EPA's goals and objectives.

iv. Who: Through this funding request, we are anticipating recruiting three new underserved Baltimore City schools to participate in a year of programming at MCEEC (July 2014- June 2015). The schools to be selected will be Title I schools in low-income, primarily minority communities in South Baltimore. Participating students will be in 3rd, 4th and/or 5th grades. MCEEC staff will request a meeting with school administration and introduce the no-cost program designed to increase Maryland School Assessment scores, then, if given a favorable response, will work

with teachers to develop a schedule. We have found that schools are generally eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation with City schools over the last decade.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community as well as promoting special community events for all ages. We are also planning to begin a partnership with the Curtis Bay Senior Citizens group at the local Curtis Bay Rec Center, and host on-site and outreach programs for this group of residents who have not previously been served by MCEEC programming. In fact, participants with the senior center recently contacted MCEEC to ask about opportunities to learn and volunteer, and this will be an excellent opportunity to bring them into our programming and serve a new audience.

(c). Project Evaluation

SLURRP is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, introduction to MCEEC as a new community resource, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues.

The educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student academic achievement in the content area and target instruction of SLURRP. The program will measure increases in student academic achievement as they complete activities that align with Maryland Common Core State Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about storm water runoff prevention and environmental stewardship. Teachers will be asked to complete feedback forms after every aspect of the program to evaluate academic and social impact on their students, on the effectiveness of the collaboration, and to provide direction for future efforts. Results of the surveys will be compiled and compared to determine the impact of the program on participants. The success of the project will be further assessed by the number of students and teachers participating, the number of storm drains stenciled, and the amount of trash collected by weight.

Participants in community events will be asked to complete pre- and post-event surveys reflecting what they have learned and if their attitude toward environmental issues in their community has changed. MCEEC will also record the number of participants at each event.

Appendices

Appendix 5(a): EPA EE Grant
Timeline and Milestones

June 2014 – June 2015

June 2014
- Acceptance of award
- Correspondence with BCPSS about selection of four new participating schools
- Correspondence with potential new schools
- Begin selection of subgrantees
- MCEEC weekend community education programs

July 2014
- Continued correspondence with BCPSS about selection of new schools
- Continued correspondence with potential new schools
- Continue subgrantee selection
- MCEEC weekend community education programs

August/September 2014
- Finalize selection of new schools
- Have pre-program meeting with principals and teachers
- Create year-long programming schedule for each school
- Continue subgrantee selection
- MCEEC weekend community education programs

September/October 2014
- Teacher professional development workshop
- Conduct student pre-program assessment and survey
- Begin preparation phase programming
- Begin tallying teacher feedback forms for each program
- Subgrant award for high school partnership projects
- Subgrant award for buses
- Begin school field programs at MCEEC
- MCEEC weekend community education programs

November/December 2014
- Continue preparation phase programming
- School field programs at MCEEC
- Shoreline clean-up event at MCEEC
- MCEEC weekend community education programs

January/February 2015
- Complete preparation phase programming, prepare for action phase programming
- Mid-year student assessment and survey
- School field programs at MCEEC
- Teacher professional development workshop
- MCEEC weekend community education programs

March/April 2015
- Action phase programming
- School field programs at MCEEC

- Subgrant award for shoreline planting projects
- Subgrant award for native plants and restoration projects
- MCEEC Environmental Festival
- MCEEC weekend community education programs

May/June 2015

- Reflection phase programming
- Conduct student post-program assessment and survey
- Tally all survey and feedback form results
- Conduct end-of-year meeting with teachers
- Shoreline clean-up event at MCEEC
- MCEEC weekend community education programs

Funding controls: Living Classrooms Foundation has an experienced accounting department that works closely with program directors to ensure that awarded grant funds are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

Appendix 5(b): EPA EE Grant
Logic Model

Outputs	Outcomes		
	Short-term	**Medium-term**	**Long-term**
Management & implementation of education programs in schools and MCEEC	SLURRP outreach programs and MCEEC field experiences for 4 new schools Collection of trash Storm drains stenciled	Continued outreach to schools Spring Festival at MCEEC Continued reduction of trash in community More storm drains stenciled	Improved environmental literacy and knowledge of storm water runoff issues Change in attitudes regarding pollution Increased attitude of environmental stewardship Significant decrease in trash & runoff pollution in schoolyards and neighborhoods resulting in improved water quality Increase in student achievement through targeted instruction
Planning and implementation of community education programs at MCEEC	Community education programs at MCEEC operate on regular schedule	Increased participation in community events at MCEEC Spring Festival at MCEEC	Increased community awareness of local land use and environmental issues Increased environmental stewardship Increased community visitation to MCEEC as a community resource
Field trips	Third, fourth, and fifth grade field trips to MCEEC	Improved knowledge of local environmental issues and potential action steps towards solutions	Change in attitudes regarding pollution Increased attitude of environmental stewardship Increase in student

			achievement through targeted instruction
Promote Programs and Events at MCEEC	Creation of brochures and banners	Distribution of brochures; regular updates to SLURRP website	Increased attendance at community events
Sub-grants to partnering entities	Determine subgrantees Creating partnerships to further the environmental education goals	Shoreline planting projects Native plantings and restoration projects Buses for transporting students to MCEEC programs High school partnership projects	Improved environmental literacy and knowledge of urban environmental issues Change in attitudes regarding pollution Increased environmental stewardship Increased wetland and native plant habitat resulting in improved water quality

Appendix 5(c): Programmatic Capability and Past Performance

Over the past 25 years, Living Classrooms Foundation has received countless federally funded assistance agreements from such diverse agencies as the United States Departments of Education, Labor, Health and Human Services, and Interior; the National Science Foundation; and NOAA. Living Classrooms has also received previous EPA grants, in 1997 and 2004. The projects that resulted from all of these funding agreements were successful, completed within the proposed time frame, and reported on within the required parameters of each individual agreement. Within the past three years, the most relevant project that is similar in size and scope that has been completed with a federal funding agreement is a grant from NOAA's B-WET environmental education program for the SLURRP initiative referenced in this application. Living Classrooms Foundation has received a continuous series of these NOAA grants since the inception of B-WET in 2002. The most recent of these was a 3-year grant awarded in 2012 ($120,000 per year, $360,000 total). Year 1 took place from July 2012 - June 2013, and we completed all goals and reporting. We are currently in Year 2 of the grant (July 2013 - June 2014). LCF has competently executed the activities funded by all of these grant agreements, met the stated objectives of the agreements, and is on a timely track to meet the objectives of our current NOAA agreement. We have punctually reported on the achievement of program outcomes and outputs for each of our federally funded grants. Reports to NOAA have been submitted in a timely fashion according to the schedule presented in the grant agreements.

Living Classrooms Foundation has a long history of completing projects and achieving the stated goals of each. We have an excellent reputation for yielding quality results and adhering to the requirements of grants and agreements from diverse funding streams, both government and private sector.

Living Classrooms Foundation was established in Baltimore, Maryland in 1985. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 40,000 students a year enrolled in diverse programs that take place on Living Classrooms' campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships. For 28 years, Living Classrooms has been a leader in education, workforce development, and positive social change in the Baltimore-Washington region, earning local and national recognition for our results. Living Classrooms Foundation addresses head-on some of the most challenging issues affecting disadvantaged children and young adults, and believes that every student, even those residing in distressed communities, can reach his or her potential if provided a continuum of resources and quality programming that is effective and structured.

In 2009, LCF joined with the Maryland Port Administration (MPA) to become the lead educational and operational partner of the Masonville Cove Environmental Education Center (MCEEC), a unique, urban nature facility located along the Patapsco River's Middle Branch. The Center currently includes a "green" building with science labs, over 50 acres of land, 70 acres of water, picnic areas, a bird sanctuary, hiking trails, a pier, and several tidal and non-tidal wetland projects. Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC hosts the annual Masonville Cove Environmental Festival, and has become a hub where SLURRP schools can learn more about the nature of their urban environment while participating in various restoration projects. To date, MCEEC has served 8,100 students and 330 teachers with educational outreach and community environmental programming, and in 2013, the site was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

LCF has been very successful in operating educational programs and schools as well. In 2013, The Crossroads School (a Baltimore City charter middle school operated by Living Classrooms) was the top scoring City middle school (6-8) on the 8th grade Maryland School Assessments (MSA) in both Reading and Math. Living Classrooms also manages Commodore John Rodgers, a Baltimore City elementary/middle school that was selected as a "turn-around" school in 2010 due to poor academic performance; Living Classrooms staff has not only led this to becoming the top performing turn-around school, but it has also become competitive with the City's higher performing schools on MSA exams, as well as becoming a national model school.

Living Classrooms Foundation currently operates on an annual $14 million budget. The Foundation has a long track record of compliance and fiscal responsibility with federal, state, local, corporate and foundation grants ranging up to and over $1,000,000. Major sources of funding have come from the Harry and Jeanette Weinberg Foundation, the W.K. Kellogg Foundation, the Steve and Renee Bisciotti Foundation, the Cal Ripken Sr. Foundation,

the Open Society Institute, Under Armour, and Constellation Energy. Living Classrooms Foundation also receives funding from the US Departments of Labor, Education, Health and Human Services, and Interior; the State of Maryland; and City of Baltimore.

Living Classrooms Foundation is operated by a permanent staff of 300; this number grows to over 400 during summer programs. Leadership is provided by James Piper Bond, President and CEO, Nicole Ruocco-CFO, Thara Taylor-Director of Development and Communications, Talib Horne-Vice President for Community Development, Bill Cunningham-Vice President for Government Relations, Steve Bountress-Vice President for Workforce Development, Scott Raymond-Vice President for Education, and Christopher Rowsom-Vice President for Maritime Heritage Programs. These staff members have been with Living Classrooms for periods ranging from six to twenty-six years with one exception--CFO Nicole Ruocco joined the staff in 2013.

Key staff members that are directly involved in directing and implementing the environmental education programming at MCEEC are Christine Truett, LCF's Director of Education; Lorraine Warnick, Director of the MCEEC, and Amie McDaniels, Education Supervisor at MCEEC. Ms. Truett has worked with Living Classrooms Foundation for 21 years, starting as a shipboard environmental educator, and moving up to Assistant Director of Education and later Director of Education, a position she has held since 2000. Ms. Truett holds a BS in biology from Mary Washington College. She has extensive experience in directing environmental education programs, including oversight of environmental education programming at MCEEC, and has an excellent track record of successfully operating programs using federal, state, and private funding.

Ms. Warnick also began working at Living Classrooms Foundation as a shipboard educator in 1997. She has since been a Program Director, Director of Environmental Education, and in 2009 became the Director of the MCEEC. Ms. Warnick holds a BS in Biological Sciences from the University of Maryland, and a MS in Environmental Science and Policy from Johns Hopkins University. She is responsible for the oversight of the programs discussed within this application, and has extensive experience implementing grants, managing budgets, grant reporting, and program evaluation.

The lead educator for the school and community programs at MCEEC is Ms. Amie McDaniels. Ms. McDaniels holds a Bachelor's Degree in Interdisciplinary Studies/Urban Environmental Education and an Elementary Education Certificate for Grades 1-6, both from University of Maryland, Baltimore County. She has been the Education Supervisor at MCEEC since June 2012, and implements school and community programs in alignment with Maryland State Curriculum, Common Core, and Environmental Literacy standards, coordinates programs and field trips, and trains volunteers and interns in the best practices of environmental education. Ms. McDaniels was previously a STEM teacher at Violetville School in Baltimore City, and also continues to work as a Naturalist at the Marshy Point Nature Center in Middle River, Maryland. She has experience with providing environmental education to inner city youth in underserved communities. All of the staff members that she oversees are well trained to effectively provide SLURRP and other community programs in such a way that they have maximum impact on the participants. If granted an EPA EE grant, LCF will use a portion of the funding to hire an additional SLURRP educator to serve the four new schools that will participate in the program.

OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 02/03/2014

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Living Classrooms Foundation

* b. Employer/Taxpayer Identification Number (EIN/TIN): 52-1369524

* c. Organizational DUNS: 6061037600000

d. Address:

* Street1: 802 South Caroline Street
Street2:
* City: Baltimore
County/Parish:
* State: MD: Maryland
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 21231-2331

e. Organizational Unit:

Department Name: Education

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Ms.
* First Name: Christine
Middle Name:
* Last Name: Truett
Suffix:

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number: 410-685-0295 x 212
Fax Number: 410-752-8433

* Email: christine@livingclassrooms.org

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*** Other (specify):**

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.951

CFDA Title:

Environmental Education Grants

*** 12. Funding Opportunity Number:**

EPA-EE-13-01

*** Title:**

Environmental Education Model Grants -- Solicitation Notice for 2013

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Baltimore City, MD

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Masonville Cove Environmental Education Center Programming

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 3rd
* b. Program/Project: 2nd

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/01/2014
* b. End Date: 09/01/2015

18. Estimated Funding ($):

* a. Federal	75,000.00
* b. Applicant	58,379.00
* c. State	
* d. Local	
* e. Other	
* f. Program Income	
* g. TOTAL	133,379.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	Mr.
* First Name:	James
Middle Name:	Piper
* Last Name:	Bond
Suffix:	
* Title:	President & CEO
* Telephone Number:	410-685-0295
Fax Number:	410-276-6347
* Email:	james@livingclassrooms.org
* Signature of Authorized Representative:	James P Bond
* Date Signed:	8/21/14

Environmental Education Grants

Number: 66.951
Agency: Environmental Protection Agency
Office: Office of the Administrator

Program Information

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Authorization (040):

National Environmental Education Act, Section 6, Public Law 101-619.

Objectives (050):

The Environmental Education Grants Program supports projects to design, demonstrate, and/or disseminate practices, methods, or techniques related to environmental education and teacher training. As required by Public Law 101-619, this grant program provides financial support for environmental education projects implemented by schools, universities, state and local government environmental and educational agencies, tribal education agencies, and nonprofit 501 (c)(3) organizations that increase public awareness and knowledge about environmental issues and provide the skills that participants in its funded projects need to make informed environmental decisions and take responsible actions toward the environment.

Funding Priority - Fiscal Year 2013: Funding priorities for fiscal year 2013 are to award 25% of our grant funding to small grants of $5000 or less through a sub-grant program. In addition, grants for model, replicable projects will also be awarded. Funding amounts are expected to be reduced compared to previous years because of our status under a continuing resolution.

Types of Assistance (060):

PROJECT GRANTS

Uses and Use Restrictions (070):

Grant funds shall be used to establish an education program which shall include, at a minimum: (1) design, demonstration, or dissemination of environmental curricula and materials on specific topics for which there are no existing materials; (2) design and demonstration of field methods, practices, and techniques, including review of environmental and ecological conditions and analysis of environmental and pollution problems; (3) projects to understand and evaluate a specific environmental issue or a specific environmental problem; (4) provision of training or related education for teachers, faculty, or related personnel in a specific geographic area or region; and (5) design and demonstration of projects to foster international cooperation in addressing environmental issues and problems involving the United States and Canada or Mexico. Priority will be given to those projects which will develop: (a) a new or significantly improved environmental education practice, method, or technique; (b) an environmental education method which may have wide application; (c) an environmental education method which addresses skills or scientific fields identified as a priority in the report developed by the National Environmental Education Advisory Council; and (d) an environmental education project which addresses an environmental issue which, in the judgment of the Administrator, is of a high priority. More specific priorities are listed above under Objectives and are specified in the annual Solicitation Notice. Restrictions: No funds made available for this program shall be used for technical training of environmental management professionals; for advocacy or lobbying; for acquisition of

CONTACT INFORMATION

Website:
http://www2.epa.gov/education

Regional or Local Office:
See Regional Agency Offices. Contact the appropriate EPA Regional Office listed in Appendix IV of the Catalog and on the website www.epa.gov/education/grants.

Headquarters Office:
Karen Scott, Environmental Education Grant Program 1704A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, District of Columbia 20460 Email: scott.karen@epa.gov Phone: (202) 564-2194.

GENERAL INFORMATION

Assistance Types:
B - PROJECT GRANTS

Applicant Eligibility:
14-State (includes District of Columbia, public institutions of higher education and hospitals)/ 36-Environment (water, air, solid waste, pesticides, radiation)
20-Public nonprofit institution/organization (includes institutions of higher education and hospitals)/ 36-Environment (water, air, solid waste, pesticides, radiation)
21-Other public institution/organization/ 36-Environment (water, air, solid waste, pesticides, radiation)
23-U.S. Territories and possessions (includes institutions of higher education and hospitals)/ 36-Environment (water, air, solid waste, pesticides, radiation)
30-Non-Government - General/ 36-Environment (water, air, solid waste, pesticides, radiation)
36-Private nonprofit

real property (including buildings); or the construction or substantial modification of any building. Assistance agreement awards under this program may involve or relate to geospatial information. Further information regarding geospatial information may be obtained by viewing the following website: http://geodata.epa.gov.

Grant recipients and sub-recipients are encouraged to adopt and enforce policies that ban text messaging while driving company-owned or -rented vehicles or government-owned vehicles, or while driving privately-owned vehicles when on official government business or when performing any work for or on behalf of the government. Grant recipients and sub-recipients are encouraged to conduct initiatives of the type described in section 3(a) of the Federal Leadership on Reducing Text Messaging While Driving Executive Order that was signed on October 1, 2009.

institution/organization (includes institutions of higher education and hospitals)/ 36-Environment (water, air, solid waste, pesticides, radiation)

Beneficiary Eligibilty:
20 - Public nonprofit institution/organization, 36 - Private nonprofit institution/organization, 96 - Education (0-8), 97 - Education (9-12), 98 - Education (13+)

Eligibility Requirements (080)

Applicant Eligibility (081):
Assistance under this program is generally available to local education agencies, colleges and universities, state education and environmental agencies, nonprofit organizations described in Section 501(c)(3) of the Internal Revenue Service, and noncommercial educational broadcasting entities as defined and licensed by the Federal Communications Commission. Applicant organizations must be located in the United States or territories and the majority of the educational activities must take place in the United States, Canada, or Mexico. For certain competitive funding opportunities under this CFDA description, the Agency may limit eligibility to compete to a number or subset of eligible applicants consistent with the Agency's Assistance Agreement Competition Policy.

Beneficiary Eligibility (082):
Education (0-8), education (9-12), education (13+), nonprofit institutions.

Credentials/Documentation (083):
Documentation of nonprofit status may be required. Applicants must demonstrate that they have appropriate background, academic training, and experience in the field, and may be asked to demonstrate the necessary equipment or facilities to carry out the project. OMB Circular No. A-87 applies to this program.

Application and Award Process (090)

Preapplication Coordination (091):
The annual solicitation notice for proposals and grant writing tips are available on the Agency's website listed below. Regarding pre-application/pre-proposal assistance with respect to competitive funding opportunities under this program description, EPA will generally specify the nature of the pre-application/pre-proposal assistance, if any, that will be available to applicants in the competitive announcement. For additional information, contact the individual(s) listed as "Information Contacts" or see Appendix IV of the Catalog. Environmental impact information is not required for this program. This program is excluded from coverage under E.O. 12372.

Application Procedures (092):
OMB Circular No. A-102 applies to this program. OMB Circular No. A-110 applies to this program. Applications are accepted for one or two solicitations on an annual grant cycle and are due at the deadline(s) stated below. Applicants submit an application package in the format required in the annual Solicitation Notice(s). Applicants submit an application package to the appropriate EPA Regional Grants Management Offices depending on where the project activities will take place. Applicants may be able to use http://www.grants.gov to electronically apply for certain grant opportunities under this CFDA. Applicants may also submit applications and attachments on paper via mail or delivery services.

Award Procedure (093):

Applications for assistance agreements are to be submitted to and evaluated by the appropriate EPA Headquarters or Regional Offices based on where the proposed project will take place and the nature of the awards as described in the solicitation notice. For competitive awards, EPA will review and evaluate applications, proposals, and/or submissions in accordance with the terms, conditions, and criteria stated in the competitive announcement. Competitions will be conducted in accordance with EPA policies/regulations for competing assistance agreements. The Agency will then advise the applicant if funding is being considered. A final work plan will then be negotiated with the applicant. All awards are competed through the annual announcement(s) and no proposals are awarded non-competitively.

Deadlines (094):
Contact the headquarters or regional office, as appropriate, for application deadlines.

Range of Approval/Disapproval Time (095):
Approximately 180 days.

Appeals (096):
Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005). Copies of these procedures may also be requested by contacting the individual(s) listed as "Information Contacts." Disputes relating to matters other than the competitive selection of recipients will be resolved under 40 CFR 30.63 or 40 CFR 31.70, as applicable.

Renewals (097):
None. Grants proposals are solicited and evaluated annually on a competitive basis. Therefore, applicants should not plan for renewals.

Assistance Consideration (100)

Formula and Matching Requirements (101):
This program has no statutory formula.
Matching Requirements: In accordance with the National Environmental Education Act (Public Law 101-619), federal funds for any project under this section shall not exceed 75 percent of the total cost of such project. The project has a 25 percent non-federal match required by statutory formula. For the purposes of this section, the non-federal share of project costs may be provided by cash or by in- kind contributions and other non-cash support.
This program does not have MOE requirements.

Length and Time Phasing of Assistance (102):
The majority of the grants awarded in this program have been completed in a one-year project period. However, up to two year project periods are possible depending upon the nature and complexity of the project. Activities must be completed within the time frame of the budget period. Two or more concurrent grants to the same organization for the same project are not allowed in this program. Grants may be incrementally or fully funded. This determination is made by the EPA. See the following for information on how assistance is awarded/released: As requested by the grantee periodically.

Post Assistance Requirements (110)

Reports (111):
No program reports are required. No cash reports are required. Recipients of grants are expected to submit progress reports on at least a semi-annual basis. Final reports and two copies of all grants products are due within 90 days of the close of the budget period. Expenditure reports are required. Performance monitoring is required.

Audits (112):
In accordance with the provisions of OMB Circular No. A-133 (Revised, June 27, 2003), "Audits of States, Local Governments, and Non-Profit Organizations," nonfederal entities that expend financial assistance of $500,000 or more in Federal awards will have a single or a program-specific audit conducted for that year. Nonfederal entities that expend less than $500,000 a year in Federal awards are exempt from Federal audit requirements for that year, except as noted in Circular No. A-133. Grants and cooperative agreements are subject to inspections and audits by the Comptroller General of the United States, the EPA Office of

Inspector General, other EPA staff, or any authorized representative of the Federal government. Reviews by the EPA Project Officer and the Grants Specialist may occur each year.

Records (113):
Financial records, including all documents to support entries on accounting records and to substantiate changes to each assistance agreement, must be kept available to personnel authorized to examine EPA assistance accounts. All records must be maintained until the expiration of three years from the date of submission of the final expenditure report. If questions still remain, such as those raised as the result of an audit, related records should be retained until the matter is completely resolved.

Financial Information (120)

Account Identification (121):
68-0108-0-1-304.

Obligations (122):
(Project Grants) FY 12 $3,660,000; FY 13 est $3,200,000; and FY 14 Estimate Not Available

Range and Average of Financial Assistance (123):
Range in the past few solicitation notices (FY 2012 and 2013) was $50,000 to $216,000 per grant. It is anticipated that FY 2013 grants will be for amounts ranging from $150,000 to $225,000. The average amount for each award the last two years has been approximately $185,000.

TAFS Codes (124):
68-0108.

Program Accomplishments (130):
Fiscal Year 2012: In FY 2012, 10 grants were awarded in the EE Sub-Award Program from a pool of approximately 40 applications. A separate Request for Proposals (RFP) was issued for the Regional Grant Program in August 2012 with a proposal deadline of December 2012, from which it is anticipated that 11 awards will be made from a pool of 487 applications. A simplified competition is being conducted at present; the RFP was sent to four eligible organizations from whom proposals will be accepted and one award will be made. Fiscal Year 2013: No information is currently available for the FY 2013 EE Grant Program. Fiscal Year 2014: No Current Data Available

Regulations, Guidelines, and Literature (140):
40 CFR Parts 7, 12, 30, 31, 32 Subpart F, 33, 47; Public Law 101-619, and the Office of Environmental Education annual Grant Program Solicitation Notice(s).

Information Contacts (150)

Regional or Local Office (151) :
See Regional Agency Offices. Contact the appropriate EPA Regional Office listed in Appendix IV of the Catalog and on the website www.epa.gov/education/grants.

Headquarters Office (152):
Karen Scott, Environmental Education Grant Program 1704A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, District of Columbia 20460 Email: scott.karen@epa.gov Phone: (202) 564-2194 [illegible].

Website Address (153):
http://www2.epa.gov/education

Related Programs (160):
66.950 Environmental Education and Training Program

Examples of Funded Projects (170):
Fiscal Year 2012: Awards made in the FY 2012 Sub-Award Program included projects to coordinate and enhance environmental education across states and regions and to support school districts and non-formal education settings in environmental literacy and stewardship activities. No awards have been made in the

2012 Regional Grants Program or in the simplified competition at this time. Fiscal Year 2013: No solicitations have been issued for FY 2013 as of this date. Fiscal Year 2014: No Current Data Available

Criteria for Selecting Proposals (180):
Basis and priorities for selecting proposals are listed in Section 6 of Public Law 101-619, National Environmental Education Act, and in the annual Solicitation Notice which can be accessed at www.epa.gov/enviroed on the internet. The evaluation and selection criteria for competitive awards under this CFDA description will be described in the competitive announcement.

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User Guide For Help: Federal Service Desk Accessibility

NEGOTIATED INDIRECT COST RATE AGREEMENT (NICRA)
NONPROFIT ORGANIZATION

ORGANIZATION:
Living Classrooms Foundation (LCF)
802 South Caroline Street
Baltimore, MD 21231

EIN: 52-1369524

DATE: March 17, 2014
FILE REF: This replaces the agreement dated October 2, 2012

The rates approved in this Agreement are for use on grants, contracts, and other agreements with the Federal Government to which OMB Circular No. A-122 applies, subject to the conditions in Section II, A, below. The rates were negotiated between Living Classrooms Foundation (LCF) and the U.S. Department of Labor in accordance with the authority contained in Attachment A, Section E.2 (a), of the Circular.

SECTION I: RATES

TYPE	EFFECTIVE PERIOD FROM	TO	RATE*	LOCATION	APPLICABLE TO
INDIRECT COST:					
Final	1/1/09	12/31/09	26.37%	All	All Programs
Final	1/1/10	12/31/10	26.68%	All	All Programs
Final	1/1/11	12/31/11	23.85%	All	All Programs
Final	1/1/12	12/31/12	18.80%	All	All Programs
Provisional	1/1/13	12/31/13	23.85%	All	All Programs
Provisional	1/1/14	12/31/14	18.80%	All	All Programs

(See Special Remarks)

* **BASE**: Direct salaries and wages and applicable fringe benefits.

TREATMENT OF FRINGE BENEFITS: LCF's accounting system tracks fringe benefit costs by individual employee and charges those costs directly or indirectly in the same manner as salary costs are recorded. LCF does not need to have a fringe benefit rate established.

TREATMENT OF PAID ABSENCES: Release time costs (vacation leave earned, sick leave used and holiday pay) are considered part of salary costs. Consequently separate claims for release time costs are not made. LCF's accounting system records release time as direct or indirect cost in the same manner that salary costs are recorded. Vacation leave earned but not used during each fiscal period is recorded as a cost in the period earned.

SECTION II: GENERAL

A. **LIMITATIONS**: Use of the rate(s) contained in the Agreement is subject to all statutory or administrative limitations and is applicable to a given contract only to the extent that funds are available. Acceptance of the rate(s) agreed to herein is predicated upon the following conditions:

(1) that no costs other than those incurred by the contractor or allocated to the contractor via an approved central service cost allocation plan were included in its indirect cost pool as finally accepted and that such incurred costs are legal obligations of the contractor and are allowable under the governing cost principles,
(2) that the same costs that have been treated as indirect costs have not been claimed as direct costs,
(3) that similar types of costs have been accorded consistent treatment, and
(4) that the information provided by the contractor which was used as a basis for acceptance of the rate(s) agreed to herein is not subsequently found to be materially inaccurate.

The elements of indirect cost and the type of distribution base(s) used in computing provisional rates are subject to revision when final rates are negotiated. Also, the rates cited in this Agreement are subject to audit.

B. **CHANGES**: The contractor is required to provide written notification to the indirect Cost Negotiator prior to implementing any changes which could affect the applicability of the approved rates. Changes in the indirect cost recovery plan, which may result from changes such as the method of accounting or organizational structure, require the prior written approval of the Division of Cost Determination (DCD). Failure to obtain such prior written approval may result in cost disallowance.

C. **NOTIFICATION TO FEDERAL AGENCIES**: A copy of this document is to be provided by this organization to other Federal funding sources as a means of notifying them of the Agreement contained herein.

D. **PROVISIONAL-FINAL RATES**: The grantee/contractor must submit a proposal to establish a final rate within six months after their fiscal year end. Billings and charges to Federal awards must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.

Indirect costs allocable to a particular award or other cost objective may not be shifted to other Federal awards to overcome funding deficiencies, or to avoid restrictions imposed by law or by terms of the award.

E. **SPECIAL REMARKS**:

1. Indirect costs charged to Federal contracts by means other than the rate(s) cited in this Agreement should be adjusted to the applicable rate cited herein and be applied to the appropriate base to identify the proper amount of indirect costs allocable to the program.

2. Contracts providing for ceilings as to the indirect cost rate(s) or amount(s) which are indicated in Section I above, will be subject to the ceilings stipulated in the contract. The ceiling rate or the rate(s) cited in this Agreement, whichever is lower, will be used to determine the maximum allowable indirect cost on the contract.

3. Administrative costs consist of all **Direct** and **Indirect** costs associated with the management of an organization's programs. Organizations should refer to their contracts/grants terms and specific program legislation for the applicable definition of Administrative Costs and any related limitations.

*** Intentionally Left Blank ***

4. LCF's indirect pool is comprised of the following elements: Salaries, Fringe Benefits, Advertising (for employment), Bank Fees (nominal), Conferences, Contract services, Drug Testing, Food, Fuel, In-kind, Insurance, Maintenance, Miscellaneous, Office Expense, Postage, Printing, Professional Fees, Program Supplies, Rent, Telephone, Travel, Uniforms, and Utilities.

ACCEPTANCE

BY THE ORGANIZATION:	**BY THE COGNIZANT AGENCY ON BEHALF OF THE FEDERAL GOVERNMENT:**
Living Classrooms Foundation (LCF) 802 South Caroline Street Baltimore, MD 21231	U.S. DEPARTMENT OF LABOR Division of Cost Determination 415 Broad Street Mount Airy, NC 27030
(Grantee/Contractor)	(Government Agency)
Nicole Ruocco	
(Signature)	(Signature)
Nicole Ruocco	for Victor M. Lopez
(Name)	(Name)
CFO	Chief, Division of Cost Determination
(Title)	(Title)
March 26, 2014	March 17, 2014
(Date)	(Date) Negotiated By: Damon Tomchick Telephone No.: 240-475-2786

U.S. ENVIRONMENTAL PROTECTION AGENCY

Grant Agreement

GRANT NUMBER (FAIN): 96329801 **MODIFICATION NUMBER:** 0 **PROGRAM CODE:** NE	**DATE OF AWARD** 08/28/2014
TYPE OF ACTION New	**MAILING DATE** 09/04/2014
PAYMENT METHOD: ASAP	**ACH#** 8264

RECIPIENT TYPE: Not for Profit	**Send Payment Request to:** N/A
RECIPIENT:	**PAYEE:**
The Living Classrooms Foundation Inc. 802 S. Caroline Street Baltimore, MD 21231-2331 **EIN:** 52-1369524	The Living Classrooms Foundation Inc. 802 S. Caroline Street Baltimore, MD 21231

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Christine Truett 802 S. Caroline Street Baltimore, MD 21231-2331 **E-Mail:** christine@livingclassrooms.org **Phone:** 410-685--0295	Kathleen Kirkland 1650 Arch Street, 3PA00 Philadelphia, PA 19103-2029 **E-Mail:** Kirkland.Kathleen@epa.gov **Phone:** 215-814-5176	Eleanor Sullivan Grants and Audit Management Branch, 3PM70 **E-Mail:** Sullivan.Eleanor@epa.gov **Phone:** 215-814-3312

PROJECT TITLE AND DESCRIPTION
LIVING CLASSROOMS FOUNDATION
The goals of the program include providing meaningful watershed educational experiences for approximately 600 Baltimore City students in 2014-15, to enhance students' academic achievement through administration of periodic, standards-based assessments that will identify areas of need and shape classroom instruction, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
09/01/2014 - 12/31/2015	09/01/2014 - 12/31/2015	$133,379.00	$133,379.00

NOTICE OF AWARD

Based on your Application dated 08/01/2014 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards $75,000. EPA agrees to cost-share 56.24% of all approved budget period costs incurred, up to and not exceeding total federal funding of $75,000. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.

ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	**ORGANIZATION / ADDRESS**
US EPA Region 3, 3PM70 1650 Arch Street Philadelphia, PA 19103-2029	U.S. EPA, Region 3 Office of Public Affairs, 3PA00 1650 Arch Street Philadelphia, PA 19103-2029

THE UNITED STATES OF AMERICA BY THE US. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official for Ronald J. Borsellino - Assistant Regional Administrator for Policy and Management John Krakowiak - Award Official delegate	**DATE** 08/28/2014

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	$	$ 75,000	$ 75,000
EPA In-Kind Amount	$	$	$ 0
Unexpended Prior Year Balance	$	$	$ 0
Other Federal Funds	$	$	$ 0
Recipient Contribution	$	$ 58,379	$ 58,379
State Contribution	$	$ 0	$ 0
Local Contribution	$	$ 0	$ 0
Other Contribution	$	$ 0	$ 0
Allowable Project Cost	$ 0	$ 133,379	$ 133,379

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.951 - Environmental Education Grant Program	National Environmental Educ. Act: Sec. 6	40 CFR PTS 30 & 47

Fiscal

Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
	1403HD0002	1314	B	03H00EE	301ME9	4183			75,000
									75,000

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	$78,688
2. Fringe Benefits	$11,803
3. Travel	$0
4. Equipment	$0
5. Supplies	$3,000
6. Contractual	$4,125
7. Construction	$0
8. Other	$18,750
9. Total Direct Charges	$116,366
10. Indirect Costs: % Base SEE ADMIN. CONDITION #3	$17,013
11. Total (Share: Recipient 43.76 % Federal 56.24 %.)	$133,379
12. Total Approved Assistance Amount	$75,000
13. Program Income	$0
14. Total EPA Amount Awarded This Action	$75,000
15. Total EPA Amount Awarded To Date	$75,000

Administrative Conditions

1. **General Terms and Conditions**

The recipient agrees to comply with the current EPA general terms and conditions available at: http://www.epa.gov/ogd/tc_jan_2014.pdf. These terms and conditions are in addition to the assurances and certifications made as part of the award and the terms, conditions or restrictions cited below.

The EPA repository for the general terms and conditions by year can be found at: http://www.epa.gov/ogd/tc.htm.

2. **One-Time Extension**

If the recipient intends to exercise the option to extend the expiration date of the award one-time for up to 12 months, as allowed under 40 CFR 30.25(f)(2), the recipient must notify the EPA Project Officer in writing of their intent to extend, and the supporting reasons to do so, at least 10 days prior to the award's expiration date.

3. **Indirect Costs**

a. If the recipient does not have a previously established indirect cost rate, and is not approved for use of a 10% flat IDC rate, it agrees to prepare and submit its indirect cost rate proposal in accordance with the appropriate federal cost principles, 2 CFR 230, "Cost Principles for Non-Profit Organizations".

The recipient must send its proposal to its cognizant federal agency within ninety (90) days from the effective date of the award of this assistance agreement. The recipient must carbon copy this EPA office with its proposal.

If EPA is the cognizant federal agency of the non-profit organization, the recipient must send its indirect cost rate proposal within ninety (90) days from the effective date of the award to:

Via Email: OGD_ IndirectCost@EPA.GOV

Via Regular Mail:
National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, MC 3903R
Washington, DC 20460
Attn: OGD Indirect Cost Rate Control Desk

Via Fedex/UPS:
National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1300 Pennsylvania Avenue, NW, 5th Floor
Washington, DC 20004
Attn: OGD Indirect Cost Rate Control Desk

The non-profit recipient agrees to follow the enclosed "Sample Indirect Cost Proposal Format for Nonprofit Organizations." The sample proposal may also be accessed at: Sample Indirect Cost Proposal Format For Nonprofit Organizations | Grants and Debarment | US EPA . Another resource is the "EPA Guide on How to Prepare an Indirect Cost Rate Proposal for a Non-Profit Organization," and may be found at http://www.epa.gov/ogd/recipient/EPATraineeIndirect.pdf

b. Recipients may not draw down indirect costs unless they: i) have a current rate agreement; ii) have been approved for a flat 10% rate; or iii) have submitted, within 90 days of award, an indirect cost rate

proposal to their cognizant federal agency for review and approval and a final rate has been determined by the cognizant agency.

c. Recipients are responsible for maintaining an approved indirect cost rate. Recipients with differences between their provisional rates and final rates are not entitled to more than the amount identified in the award for indirect costs without EPA approval.

4. **Mandatory Non-Profit Recipient Training**

Recipient acknowledges that two employees of this recipient organization must complete the mandatory on-line training, "EPA Grant Management Training for Non-Profit Applicants and Recipients." One person must be the project manager, or equivalent, for this assistance agreement. The other individual must be the person authorized to draw down funds for this assistance agreement. Both employees must complete the training prior to the receipt of any grant funds. The recipient may access the course through the internet at:

http://www.epa.gov/ogd/training/recip_train.htm

At the end of the course the certifications of completion must be signed and emailed to R3_Grant_Applications@epa.gov as a pdf file, or if that is not possible, mailed to EPA, Grants Management Officer (3PM70), 1650 Arch Street, Philadelphia, PA 19114. EPA will not release funds to the recipient until the required training is completed. Certifications must be maintained throughout the life of the agreement. The training must be completed every three (3) years by both employees and when there are personnel changes.

5. **Unpaid Federal Tax Liabilities and Felony Convictions for Non-profit and For-profit Organizations**

This award is subject to the provisions contained in the Consolidated Appropriations Act, 2014, Public Law 113-76, Division G, Title IV, Sections 422 and 423 regarding unpaid federal tax liabilities and federal felony convictions, which also have been included in prior appropriations acts. Accordingly, by accepting this award the recipient acknowledges that it: (1) is not subject to any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, and (2) has not been convicted of a felony criminal conviction under any Federal law within 24 months preceding the award, unless EPA has considered suspension or debarment of the corporation based on these tax liabilities or convictions and determined that such action is not necessary to protect the Government's interests. If the recipient fails to comply with these provisions, EPA will annul this agreement and may recover any funds the recipient has expended in violation of Sections 422 and 423.

6, **Utilization of Small, Minority and Women's Business Enterprises**

GENERAL COMPLIANCE, 40 CFR, Part 33
The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D
This assistance agreement is a Technical Assistance Grant (TAG); or the award amount is $250,000 or less; or the total dollar amount of all of the recipient's financial assistance agreements from EPA in the current Federal fiscal year is $250,000 or less. Therefore, the recipient of this assistance agreement is exempt from the fair share objective requirements of 40 CFR, Part 33, Subpart D, and is not required to negotiate fair share objectives/goals for the utilization of MBE/WBEs in its procurements.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C
Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts

whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained:

(a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

(b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

(c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

(d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

(e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.

(f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E

MBE/WBE reporting is limited to **annual** reports and only required for assistance agreements where one or more the following conditions are met:

(a) there are any funds budgeted in the contractual, equipment or construction lines of the award;
(b) $3,000 or more is included for supplies; or
(c) there are funds budgeted for subawards or loans in which the expected budget(s) meet the conditions as described in items (a) and (b).

Based on EPA's review of the proposed budget, this award likely meets one or more of the conditions as described above, therefore, the recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis.

However, if this award does not meet the conditions as described above, the recipient should provide the **EPA Grant Specialist** with a justification and budget details indicating that based on the planned budget, this award is **not** subject to the DBE reporting requirements.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the last report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Last reports are due 90 days after the end of the project period.

The reporting requirement is based on planned procurements. Recipients with funds budgeted for non-supply procurement and/or $3,000 or more in supplies are required to report annually whether the planned procurements take place during the reporting period or not. If no procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be **signed and emailed to R3_MBE-WBE_Reports@epa.gov as a pdf file, or if that is not possible, mailed to Cynthia Burrows, Diversity/EEO Manager (3DA10), U.S. EPA - Region III, 1650 Arch Street, Philadelphia, PA 19103-2029 with a courtesy copy to the Grants Specialist**. The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302
The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)
Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

7. **Annual Federal Financial Report**

Pursuant to 40 CFR 30.52(a)(1) or 31.41(b), the recipient agrees to submit to EPA an annual Federal Financial Report (FFR) (SF-425) when the budget period is longer than one year. The following reporting period end dates shall be used for interim reports: 3/31, 6/30, 9/30, or 12/31. Interim reports shall be submitted no later than 90 days after the end of each reporting period.

The form is available on the internet at http://www.epa.gov/financial/forms. **All FFRs must be submitted to the Las Vegas Finance Center (LVFC) via email** LVFC-grants@epa.gov **or fax at 702-798-2423.**

Programmatic Conditions

1, On-Site Evaluation

The recipient agrees to participate in a detailed on-site evaluation to assess the adequacy of program progress, if selected by EPA. The evaluation will include an overview of the project and project expenditures. The evaluation schedule will be negotiated by the recipient and the EPA Project Officer.

2. Progress Reports

The recipient agrees to submit the following progress reports to the EPA Project Officer: an informal progress report due three (3) months from the start of the budget/project start date, and a formal semi-annual progress report due within 30 days of the end of each six month period.

3. Performance Reports

In accordance with 40 C.F.R. § 30.51 (d), the recipient agrees to include in performance reports submitted under this agreement brief information on each of the following areas: 1) a comparison of actual accomplishments with the anticipated outputs/outcomes specified in the assistance agreement work plan; 2) reasons why anticipated outputs/outcomes were not met; and 3) other pertinent information, including, when appropriate, analysis and explanation of cost overruns or high unit costs.

In accordance with 40 C.F.R. § 30.51 (f), the recipient agrees that it will notify EPA of problems, delays or adverse conditions which materially impair the ability to meet the outputs/outcomes specified in the

assistance agreement work plan.

4. Final Report and Tangible Products

The recipient agrees to submit two copies of the final report and two copies of all tangible products derived as a result of the project, e.g. videos, curricula, photos, etc., to the EPA Project Officer. These are due within ninety (90) days after the end of the project period. The report will clearly describe what happened during the project and briefly, but specifically, address the following items:

a. A narrative stating how you accomplished what you described in your work plan and what changes took place as a result of the project EPA supported.

b. A section giving "tips" on how to undertake a similar project, i.e., what were the "lessons learned".

c. Two copies of any "work products" produced including an agenda of workshops or training sessions to illustrate what you have achieved. If possible, include a video with highlights of the session and/or a list of key materials used.

5, Work Products Disclaimer

The recipient agrees to issue the following disclaimer on all work products disseminated: "Although this project is funded in part by the Environmental Protection Agency, it does not necessarily reflect the opinion or position of the EPA".

6. EPA Funding

The recipient agrees to credit EPA as a source of project funds, when appropriate, either by listing "U.S. Environmental Protection Agency" or stating that "This product was funded in part by the U.S. EPA Environmental Education Program."

7. Pre-Award Cost

Pre-Award Costs have been approved in accordance with the recipient's application dated February 3, 2014.

8. Minimum Matching Share Requirement

This award and the resulting federal funding share of 56.23% as shown under "Notice of Award" above is based on estimated costs requested in the recipient's application dated 2/3/2014. While actual total costs may differ than those estimates, the recipient is required to provide no less than 25% of the final total allowable program/project costs (outlays). EPA's participation shall not exceed the total amount of federal funds awarded or the maximum federal share for this program of 75% of the final total allowable program/project costs.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Grant Agreement

GRANT NUMBER (FAIN): 96329801 **MODIFICATION NUMBER:** 0 **PROGRAM CODE:** NE	**DATE OF AWARD** 08/28/2014
TYPE OF ACTION New	**MAILING DATE** 09/04/2014
PAYMENT METHOD: ASAP	**ACH#** 8264

RECIPIENT TYPE:
Not for Profit

Send Payment Request to:
N/A

RECIPIENT:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231-2331
EIN: 52-1369524

PAYEE:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Christine Truett 802 S. Caroline Street Baltimore, MD 21231-2331 **E-Mail:** christine@livingclassrooms.org **Phone:** 410-685--0295	Kathleen Kirkland 1650 Arch Street, 3PA00 Philadelphia, PA 19103-2029 **E-Mail:** Kirkland.Kathleen@epa.gov **Phone:** 215-814-5176	Eleanor Sullivan Grants and Audit Management Branch, 3PM70 **E-Mail:** Sullivan.Eleanor@epa.gov **Phone:** 215-814-3312

PROJECT TITLE AND DESCRIPTION
LIVING CLASSROOMS FOUNDATION
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BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
09/01/2014 - 09/01/2015	09/01/2014 - 09/01/2015 (12/31/15)	$133,379.00	$133,379.00

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ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	**ORGANIZATION / ADDRESS**
US EPA Region 3, 3PM70 1650 Arch Street Philadelphia, PA 19103-2029	U.S. EPA, Region 3 Office of Public Affairs, 3PA00 1650 Arch Street Philadelphia, PA 19103-2029

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official for Ronald J. Borsellino - Assistant Regional Administrator for Policy and Management John Krakowiak - Award Official delegate	**DATE** 08/28/2014

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
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Recipient Contribution	$	$ 58,379	$ 58,379
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Other Contribution	$	$ 0	$ 0
Allowable Project Cost	$ 0	$ 133,379	$ 133,379

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.951 - Environmental Education Grant Program	National Environmental Educ. Act: Sec. 6	40 CFR PTS 30 & 47

Fiscal

Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
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Budget Summary Page

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3. **Indirect Costs**

a. If the recipient does not have a previously established indirect cost rate, and is not approved for use of a 10% flat IDC rate, it agrees to prepare and submit its indirect cost rate proposal in accordance with the appropriate federal cost principles, 2 CFR 230, "Cost Principles for Non-Profit Organizations".

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b. Recipients may not draw down indirect costs unless they: i) have a current rate agreement; ii) have been approved for a flat 10% rate; or iii) have submitted, within 90 days of award, an indirect cost rate

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At the end of the course the certifications of completion must be signed and emailed to R3_Grant_Applications@epa.gov as a pdf file, or if that is not possible, mailed to EPA, Grants Management Officer (3PM70), 1650 Arch Street, Philadelphia, PA 19114. EPA will not release funds to the recipient until the required training is completed. Certifications must be maintained throughout the life of the agreement. The training must be completed every three (3) years by both employees and when there are personnel changes.

5. **Unpaid Federal Tax Liabilities and Felony Convictions for Non-profit and For-profit Organizations**

This award is subject to the provisions contained in the Consolidated Appropriations Act, 2014, Public Law 113-76, Division G, Title IV, Sections 422 and 423 regarding unpaid federal tax liabilities and federal felony convictions, which also have been included in prior appropriations acts. Accordingly, by accepting this award the recipient acknowledges that it: (1) is not subject to any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, and (2) has not been convicted of a felony criminal conviction under any Federal law within 24 months preceding the award, unless EPA has considered suspension or debarment of the corporation based on these tax liabilities or convictions and determined that such action is not necessary to protect the Government's interests. If the recipient fails to comply with these provisions, EPA will annul this agreement and may recover any funds the recipient has expended in violation of Sections 422 and 423.

6, **Utilization of Small, Minority and Women's Business Enterprises**

GENERAL COMPLIANCE, 40 CFR, Part 33
The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D
This assistance agreement is a Technical Assistance Grant (TAG); or the award amount is $250,000 or less; or the total dollar amount of all of the recipient's financial assistance agreements from EPA in the current Federal fiscal year is $250,000 or less. Therefore, the recipient of this assistance agreement is exempt from the fair share objective requirements of 40 CFR, Part 33, Subpart D, and is not required to negotiate fair share objectives/goals for the utilization of MBE/WBEs in its procurements.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C
Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts

whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained:

(a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

(b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

(c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

(d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

(e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.

(f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E

MBE/WBE reporting is limited to **annual** reports and only required for assistance agreements where one or more the following conditions are met:

(a) there are any funds budgeted in the contractual, equipment or construction lines of the award;
(b) $3,000 or more is included for supplies; or
(c) there are funds budgeted for subawards or loans in which the expected budget(s) meet the conditions as described in items (a) and (b).

Based on EPA's review of the proposed budget, this award likely meets one or more of the conditions as described above, therefore, the recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis.

However, if this award does not meet the conditions as described above, the recipient should provide the **EPA Grant Specialist** with a justification and budget details indicating that based on the planned budget, this award is **not** subject to the DBE reporting requirements.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the last report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Last reports are due 90 days after the end of the project period.

The reporting requirement is based on planned procurements. Recipients with funds budgeted for non-supply procurement and/or $3,000 or more in supplies are required to report annually whether the planned procurements take place during the reporting period or not. If no procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be **signed and emailed to R3_MBE-WBE_Reports@epa.gov as a pdf file, or if that is not possible, mailed to Cynthia Burrows, Diversity/EEO Manager (3DA10), U.S. EPA - Region III, 1650 Arch Street, Philadelphia, PA 19103-2029 with a courtesy copy to the Grants Specialist**. The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302
The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)
Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

7. **Annual Federal Financial Report**

Pursuant to 40 CFR 30.52(a)(1) or 31.41(b), the recipient agrees to submit to EPA an annual Federal Financial Report (FFR) (SF-425) when the budget period is longer than one year. The following reporting period end dates shall be used for interim reports: 3/31, 6/30, 9/30, or 12/31. Interim reports shall be submitted no later than 90 days after the end of each reporting period.

The form is available on the internet at http://www.epa.gov/financial/forms. **All FFRs must be submitted to the Las Vegas Finance Center (LVFC) via email LVFC-grants@epa.gov or fax at 702-798-2423.**

Programmatic Conditions

1, On-Site Evaluation

The recipient agrees to participate in a detailed on-site evaluation to assess the adequacy of program progress, if selected by EPA. The evaluation will include an overview of the project and project expenditures. The evaluation schedule will be negotiated by the recipient and the EPA Project Officer.

2. Progress Reports

The recipient agrees to submit the following progress reports to the EPA Project Officer: an informal progress report due three (3) months from the start of the budget/project start date, and a formal semi-annual progress report due within 30 days of the end of each six month period.

3. Performance Reports

In accordance with 40 C.F.R. § 30.51 (d), the recipient agrees to include in performance reports submitted under this agreement brief information on each of the following areas: 1) a comparison of actual accomplishments with the anticipated outputs/outcomes specified in the assistance agreement work plan; 2) reasons why anticipated outputs/outcomes were not met; and 3) other pertinent information, including, when appropriate, analysis and explanation of cost overruns or high unit costs.

In accordance with 40 C.F.R. § 30.51 (f), the recipient agrees that it will notify EPA of problems, delays or adverse conditions which materially impair the ability to meet the outputs/outcomes specified in the

assistance agreement work plan.

4. Final Report and Tangible Products

The recipient agrees to submit two copies of the final report and two copies of all tangible products derived as a result of the project, e.g. videos, curricula, photos, etc., to the EPA Project Officer. These are due within ninety (90) days after the end of the project period. The report will clearly describe what happened during the project and briefly, but specifically, address the following items:

a. A narrative stating how you accomplished what you described in your work plan and what changes took place as a result of the project EPA supported.

b. A section giving "tips" on how to undertake a similar project, i.e., what were the "lessons learned".

c. Two copies of any "work products" produced including an agenda of workshops or training sessions to illustrate what you have achieved. If possible, include a video with highlights of the session and/or a list of key materials used.

5, Work Products Disclaimer

The recipient agrees to issue the following disclaimer on all work products disseminated: "Although this project is funded in part by the Environmental Protection Agency, it does not necessarily reflect the opinion or position of the EPA".

6. EPA Funding

The recipient agrees to credit EPA as a source of project funds, when appropriate, either by listing "U.S. Environmental Protection Agency" or stating that "This product was funded in part by the U.S. EPA Environmental Education Program."

7. Pre-Award Cost

Pre-Award Costs have been approved in accordance with the recipient's application dated February 3, 2014.

8. Minimum Matching Share Requirement

This award and the resulting federal funding share of 56.23% as shown under "Notice of Award" above is based on estimated costs requested in the recipient's application dated 2/3/2014. While actual total costs may differ than those estimates, the recipient is required to provide no less than 25% of the final total allowable program/project costs (outlays). EPA's participation shall not exceed the total amount of federal funds awarded or the maximum federal share for this program of 75% of the final total allowable program/project costs.

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 3rd ✓ * b. Program/Project: 2nd ✓

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/01/2016 * b. End Date: 08/31/2017

18. Estimated Funding ($):

* a. Federal	60,000.00	26.58
* b. Applicant	165,807.00	73.42
* c. State	0.00	
* d. Local	0.00	
* e. Other	0.00	
* f. Program Income	0.00	
* g. TOTAL	225,807.00 ✓	

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an Internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Analeigh

Middle Name:

* Last Name: Smith

Suffix:

* Title: Development Officer

* Telephone Number: 41-685-0295 Fax Number:

* Email: asmith@livingclassrooms.org

* Signature of Authorized Representative: Analeigh Smith * Date Signed: 04/07/2016

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*** Other (specify):**

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.951

CFDA Title:

Environmental Education Grants

*** 12. Funding Opportunity Number:**

EPA-EE-16-01

*** Title:**

Environmental Education Local Grants Program -- Solicitation Notice for 2016

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Masonville Cove Environmental Education Programming

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

GRANTS.GOV

Grant Application Package

Opportunity Title:	Environmental Education Local Grants Program -- Solicit
Offering Agency:	Environmental Protection Agency
CFDA Number:	66.951
CFDA Description:	Environmental Education Grants
Opportunity Number:	EPA-EE-16-01
Competition ID:	
Opportunity Open Date:	02/10/2016
Opportunity Close Date:	04/08/2016
Agency Contact:	Karen Scott EEGrants@EPA.gov

This opportunity is only open to organizations, applicants who are submitting grant applications on behalf of a company, state, local or tribal government, academia, or other type of organization.

Application Filing Name: Living Classrooms Foundation

Select Forms to Complete

Mandatory

Application for Federal Assistance (SF-424)

Project Narrative Attachment Form

Budget Information for Non-Construction Programs (SF-424A)

Optional

☒ Other Attachments Form

Instructions

Show Instructions >>

This electronic grants application is intended to be used to apply for the specific Federal funding opportunity referenced here.

If the Federal funding opportunity listed is not the opportunity for which you want to apply, close this application package by clicking on the "Cancel" button at the top of this screen. You will then need to locate the correct Federal funding opportunity, download its application and then apply.

OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 04/07/2016

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Living Classrooms Foundation

* b. Employer/Taxpayer Identification Number (EIN/TIN): 52-1369524

* c. Organizational DUNS: 6061037600000

d. Address:

* Street1: 802 S. Caroline Street
Street2:
* City: Baltimore
County/Parish:
* State: MD: Maryland
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 21231-3332

e. Organizational Unit:

Department Name: Masonville Cove

Division Name: Education

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Ms.
* First Name: Christine
Middle Name:
* Last Name: Truett
Suffix:

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number: 4106850295
Fax Number: 4107528433

* Email: christine@livingclassrooms.org

NE-96349701-0

Your session will expire in:
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Eleanor Sullivan
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  - My Funding Opportunities
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  - Create a new Non-Competitive Application Package
    - Mandatory Non-Competitive
    - Discretionary Non-Competitive
- Application Processing
  - My Applications
  - Create a New Application

Application Processing

✓ Pre-Award completed successfully for "Living Classrooms Foundation".

My Tasks

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Assigned 4 Assigned 4 Reader 5

Edit/View	Awarding Region	Grant #	Applicant Name	Project Title	Assignee	Opp ID	Grants.gov Tracking #	St
View Edit Grant Application EPA-EE-16-01	EPA R3	96349801-0	MDLTWNSP - Middletown Township	Education in Action to Save Idelwood	Eleanor Sullivan	EPA-EE-16-01	GRANT12136438	GS: Upd App Pacl
View Edit Grant Application EPA-EE-16-01	EPA R3	96349901-0	*SF424:* Prince William County Public Schools	Ready for Action: Broadening the Scope of Middle and High School MWEEs	Eleanor Sullivan	EPA-EE-16-01	GRANT12137662	GS: Upd App Pacl
View Edit Grant Application EPA-CEP-01 Unopened Grant Application EPA-CEP-01	EPA R3		DCDOE - District of Columbia Govt of dba Department of Energy and Environment	DC non-point source management program	Eleanor Sullivan	EPA-CEP-01	GRANT12254838	Drat App
View Edit Grant Application EPA-CEP-01	EPA R3	00350017-0	WVDEP25143 - WV Dept of Environmental Protection	West Virginia 319 Nonpoint Source Implementation Grant	Eleanor Sullivan	EPA-CEP-01	GRANT12226028	Drat App

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Masonville Cove Env. Ed Campus

(a) Work Plan:

(i) Project Summary

(1) Organization and Partnerships: Living Classrooms Foundation (LCF) is a Baltimore-based 501(c)(3) educational organization that strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 30 years, LCF has provided experiential environmental education to a wide variety of audiences, with a special emphasis on serving at-risk youth. Our environmental education programs are headquartered at the Masonville Cove Environmental Education Campus (MCEEC) in South Baltimore, and are managed by MCEEC Director Lorraine Warnick. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. Key partners are the Baltimore City schools participating in MCEEC programming, as they assist with curricular alignment, program implementation, and professional development.

(2) History of Receiving EE Grants: In 2014, LCF received an EPA-EE Grant for the MCEEC Environmental Education programming proposed within this application. However, with the funding requested for 2016-17, we are expanding upon the previously funded programs with the addition of BEESMART (Baltimore Environmental Education Math and Reading Trailblazers), which enhances and extends one of MCEEC's major environmental education initiatives, SLURRP (School Leadership in Urban Runoff Reduction Project) into the summer for students who participated in SLURRP during the previous school year. In addition, we will use EPA-EE funds to expand SLURRP into two more Baltimore City schools during the 2016-17 school year to reach greater numbers of youth and teachers (for a total of eight schools served).

(3) Goals and Objectives: Program goals are: 1) involvement of two additional schools in the SLURRP environmental education initiative during 2016-17; 2) extension of SLURRP participants' learning into summer 2017 through BEESMART; and 3) Community Engagement events including weekend environmental education programming for families, evening presentations for adults, regular on-site guided walks, and a spring environmental festival. Program objectives are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the community, provide an awareness of land use and local environmental issues, and to create behavioral change in regards to both education and environmental literacy. Academically, students will exhibit increases in achievement as they complete program activities. These goals and objectives meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities focused on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused learning standards. Community programs educate residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, littering, recycling, and water conservation, among others.

(4) Priorities: MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in family education programs and stewardship activities. The project also addresses EPA Environmental Priority 4 (Protecting Water), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has previously been identified by the Maryland Department of the Environment as having high levels of contaminants.

(5) Local Relevance: Programming takes place at MCEEC, 1000 Frankfurst Avenue, Baltimore, MD 21226, and in South Baltimore public schools, all located within the Patapsco River watershed, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. MCEEC is an approved Baltimore Urban Waters Initiative project.

(6) Implementation: MCEEC programs are implemented through year-long outreach lessons that provide a sustained experience in schools, hands-on field trips for school youth, a 5-week summer program, on-site weekend programs, and community events. Sub-grants will be awarded to entities that will enhance our environmental literacy programs in local schools and/or implement community environmental events for families or adults.

(7) Audience: Programming will serve South Baltimore residents, including ~650 3rd-5th grade students and 16 teachers from Title I public schools, and ~1,500 community members from toddler to adult. Many participants are low-income and/or minorities (particularly Latino), as described in section 4a below.

(8) Costs: The main types of expenses that will be requested from EPA include salaries, fringe benefits, program supplies, indirect costs, and the required sub-awards to other organizations (three sub-grants of $5,000 each). ✓

OK

(ii) Detailed Project Description

(1) What: **a)** The proposed project will include implementation of several key programs that make up the MCEEC's overall environmental education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for two Baltimore City schools (in addition to the six currently being served with other funding sources); 2) BEESMART, a five-week summer program that extends and expands the SLURRP concept into the summer months to help participating students retain academic skills while participating in environmental education; and 3) Community Engagement events and programs that engage residents of all ages in environmental literacy activities. SLURRP and BEESMART fulfill EPA Educational Priority 2 (Educational Advancement) by providing formal hands-on environmental literacy programs to students that advance their knowledge of environmental science and issues and align with Maryland's College and Career-Ready educational standards, Maryland Environmental Literacy Standards, and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. Community Engagement events fulfill Educational Priority 3 (Community Projects) by using interactive stewardship activities, including community clean-ups and shoreline plantings, as a hook to attract diverse audiences to the center for environmental education. Program implementation is as follows:

- **SLURRP**: This well-established curriculum and proven Meaningful Watershed Educational Experience (MWEE) has been providing hands-on environmental education to Baltimore City youth in grades 4 and 5 since 2002. Currently we are serving six schools, but this grant would allow us to expand our reach to two additional underserved city schools. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. Through five outreach programs and one trip to MCEEC, students use critical thinking, observation, and data collection to answer the question, "What is storm water runoff pollution, and how can we help prevent it?" The program targets critical connections between environmental science, reading, writing, and math. During the year-long program, MCEEC educators visit each participating school three times and guide 4th and 5th grade students through preparation, action, and reflection phases; teachers are trained to lead an additional two outreach programs in their classroom/schoolyard, for a total of five school-based outreach programs during the year. Programming occurs primarily on school grounds and in the immediate community. All students also participate in one field experience at the MCEEC, where they engage in hands-on learning and restoration activities. Teachers participate in one professional development workshop, as well as ongoing conversations with SLURRP educators regarding student action steps and environmental awareness.

4th Grade SLURRP Activities: In the first preparation program for 4th grade students, "What is a Watershed?," MCEEC instructors visit schools and engage students in an interactive, multimedia presentation that introduces the general concepts of a watershed and runoff pollution. Students investigate how land use affects runoff by working with a hands-on enviroscape model and grade-appropriate worksheets that emphasize reading and writing. Students also receive watershed maps and work with the interactive watershed model so that they can understand that they are part of a larger ecological system and that runoff pollution is a regional concern. They will then identify sources of pollution in their community. At the end of the first outreach, teams of students will be assigned with surveying parents and neighbors about runoff and attitudes towards littering.

Building on their newfound knowledge of runoff pollution, the second MCEEC-led outreach addresses Storm Drains and Sewers. Students learn the difference between the two: how sewers direct water to wastewater treatment plants to be cleaned, but storm drains send water straight back into the watershed with everything that it has collected along the way. Students discuss where water goes when it falls on an impervious surface compared to a pervious surface. Using microscopes, they compare and contrast water samples of rainwater taken from their school's parking lot with water samples that have traveled through the culvert at Masonville Cove. These activities should lead them to conclude that pollution on their schoolyard affects water quality for the whole region.

The third MCEEC-led outreach activity, "Future Environmental Engineers" is designed to help students understand and demonstrate the role of engineering in environmental protection. Students watch a video of outfall at Masonville Cove during a rainstorm, then work together to answer these questions: Using what we have learned about runoff, impervious and pervious surfaces, plants, and storm drains and sewers, how can this be prevented in the future? How can we slow this water down and make sure trash is not entering our water? Students are provided with household materials and asked to design and build a trash interceptor model that will be tested in real-world trials along with models made by students at other schools to see which one prevents more trash from entering the watershed. When students visit MCEEC, they will be able to watch construction of a full-scale "real life" trash interceptor being installed by the Maryland Port Administration at the Masonville Cove outfall just downhill from the Education Center on the campus. This will provide an excellent example to demonstrate the real world

implications of what they are learning in SLURRP.

Through these first three outreach programs, students come to understand that trash on the city streets will ultimately end up in the Chesapeake Bay or one of its tributaries. To help prevent this, the first teacher-led 4th-grade outreach is an action step in the form of a neighborhood trash clean-up. MCEEC staff will provide teachers with gloves, trash bags, and scales for measuring amounts of trash collected, and instructions for leading students through the activity, including proper disposal of trash and recyclables collected. Students will record data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.

The second teacher-led outreach will be "Missing Creatures in Maryland." Students will learn how storm water runoff and land degradation has threatened some of Maryland's most unique and valuable wildlife, like the hellbender salamander. They will propose ways to save these important species by creating a "MISSING" poster to be displayed in their schools, and will present what they have learned to other students, to help spread the knowledge that human activities are negatively affecting animal life in the Chesapeake Bay watershed.

As an additional outreach, 4th grade students will take a field trip to participate in environmental education activities at MCEEC. This allows students to reflect on all that they have learned during the SLURRP experience by seeing the watershed in action. Field trip activities are richly structured, STEM-based learning experiences that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. By conducting projects and experiments at the edge of the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. This reflection activity synthesizes all the information that students have learned and explored together: an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.

5th grade SLURRP Activities: During the first 5th grade SLURRP outreach, students will recap what they have previously learned in SLURRP regarding the Chesapeake Bay and the role students play in their communities in relationship to the Bay (these will be students that participated in SLURRP during the previous year with other funding sources). Using their previous knowledge, the first MCEEC-led activity of the year is to create a "Schoolyard Report Card." SLURRP staff, students, and teachers will walk the entire area of their schoolyard and survey and identify amounts of impervious surface or other problem areas that contribute to storm water runoff. They will grade the schoolyard on elements such as amounts of green space vs. asphalt, and areas where trash is prone to collect. They will discuss improvements they can make so that their schoolyard can more positively impact the condition of the Chesapeake Bay.

The Schoolyard Report Card preparation phase will lead into the next outreach, "Storm Drain Mapping." Building on what they have learned, students will understand that runoff pollution within any part of a watershed can affect areas downstream of the source of that pollution. Students will be able to comprehend the concepts of sub-watersheds by using GPS units to map elevations on their schoolyard, including all of the storm drains on the school property and surrounding area. They will identify land use near the storm drains, and assess the potential pollutants that may contribute to storm water runoff.

The first teacher-led outreach will have students creating a brochure educating the community about storm water runoff. The Center for Watershed Protection's "Teacher's Guide for Creating a Water Monitoring Program" is used as a reference for this project. With the help of carefully constructed worksheets, students will create informational brochures to be distributed to the residents of the community where storm drain stenciling will occur. The brochures contain information on where the storm drains empty, and the importance of keeping the drains clear of trash and other pollutants. The brochure will notify the community that the students will be out stenciling storm drains, explain why it is being done, and provide tips for residents to reduce storm water runoff on their own.

Following creation of the brochure will be a "Storm Drain Stenciling/Community Clean-Up" action project. Throughout this activity, students are challenged to analyze the flow of storm water on their campus and make note of any problem areas, such as regions of the street or schoolyard that flood during rain events. Students then review storm drain maps from the Baltimore Department of Public Works and try to locate the outfall locations for the storm drains in their neighborhood so that they can see where their storm water ultimately goes. With this knowledge, students are able to understand why they should complete the action step of stenciling storm drains. Under the supervision of MCEEC staff, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump"; after stenciling is complete, they will conduct a community clean-up.

The second teacher-led outreach will be another action step: "Redesign Your Schoolyard." Using the information gleaned during the preparation phase at the start of the school year, students and teachers will work together to create a multi-year planting design of a functional and aesthetically pleasing green area unique to each

school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property. Through professional development, teachers will be encouraged to seek funding for implementation of these designs. These designs may be implemented and expanded in future years with additional plantings and wildlife habitat enhancements, such as birdhouses and butterfly gardens. SLURRP-trained teachers will help students and school representatives to develop and incorporate environmentally friendly maintenance strategies, such as limited use of pesticides and fertilizers. Students will synthesize all that they have learned about storm water runoff and how to prevent it with their designs and will create posters and blueprints that they will present to their classmates.

The 5th grade reflection phase will include participation in the annual Masonville Cove Environmental Festival, during which students will reflect on their SLURRP experiences while planting native species, picking up litter, composting their lunch waste, and learning about native wildlife. They also have the opportunity to speak with representatives from a variety of local environmental organizations who host stations addressing urban runoff pollution and what people can do to help prevent it, which provides a direct link to their work throughout SLURRP.

As part of SLURRP, integrated professional development for classroom teachers will be delivered, with the result that teachers will be able to actively lead two outreach programs. The professional development will familiarize teachers with the SLURRP environmental content, help them reinforce academic instruction in areas of student need, and strengthen the continuity between SLURRP subjects and required content standards. LCF's SLURRP staff will provide training and materials that will prepare teachers to lead two of the five outreach programs on their own in their classrooms/schoolyards, including action and reflection phases. This is a change from our past years of SLURRP implementation, in which LCF staff provided an entire package of programming for the entire year and conducted all outreach programs. However, with Maryland's new Environmental Literacy graduation requirement, we are placing a focus on helping prepare teachers with the expertise necessary for them to incorporate and reinforce the appropriate environmental science standards necessary to meet classroom STEM and literacy outcomes and align programming with Next Generation Science Standards. We hope that by giving ownership of a portion of the program to the teachers, that they will be encouraged to be environmental role models for their students. Throughout the year, teachers will also engage in discussions regarding SLURRP participation, which will allow SLURRP staff and teachers to self-assess their instruction around their students' performance.

- **BEESMART**: This 5-week full-day summer program for rising 3rd-5th graders uses E-STEM projects related to real-world local environmental problems as a vehicle for students to retain reading and math levels throughout the summer. The program will serve 60 students who either participated in SLURRP during the previous school year, or who will participate in SLURRP in upcoming years, and therefore further enhances and expands environmental science education for youth through the summer. This creates a continuity of learning from school year to summer that is expected to have a significant impact on the achievement levels of participants, in environmental literacy as well as reading. This continuity will also be advantageous as students continue on in school and will be better prepared to meet Maryland's Environmental Literacy graduation requirement.

BEESMART operates at MCEEC and on the campus of two Baltimore City public schools. Each morning, students receive one and a half to two hours of academic instruction including small-group coaching sessions with a Reading Specialist and Educator-led STEM lessons (on some days these will occur onboard LCF's historic buyboat Mildred Belle). After lunch, students will be engaged in a literacy-focused lesson infused with one of the five weekly STEM themes: Healthy Environment, Healthy Water, Healthy Habitat, Healthy Food, and Masonville Memories. Afternoons will be filled with a variety of hands-on STEM-focused academic and enrichment activities.

During BEESMART, students have the unique opportunity to build NOAA-designed underwater Remotely Operated Vehicles equipped with cameras, called Aquabotz, which support student investigations into underwater areas that are not otherwise accessible. Students also learn computer and resource analysis skills as they research topics to solve a problem, and are introduced to tablet use as they investigate the impact of litter on land and water, study water quality, and explore topics such as decomposition. They use their skills and imaginations to solve local environmental problems caused by improper trash disposal and illegal dumping. The following activities will occur multiple times within the program: Service Learning projects (i.e neighborhood and watershed clean-ups, storm drain stenciling), Computer Lab E-STEM research, and activities chosen by students.

- **Community Engagement Programs**: LCF will plan, develop, and implement free community environmental literacy events for South Baltimore residents. Community Education Coordinators will plan, advertise, conduct, and track an average of five community education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with local churches and community groups to create new opportunities for community participation on the Masonville Cove Campus. For example, in the coming year, we

will be working with the Hispanic Access Foundation and a local church group to develop volunteer opportunities and outreach programs for the growing Latino population in the community.

Weekend programs for younger children and their families may include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban neighborhoods and encourage them to take part in the free community activities that are offered. In addition, free Guided Walks with a Maryland Master Naturalist are offered regularly, weather permitting.

Finally, MCEEC will host bi-annual community shoreline clean-up events in the spring and fall. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, styrofoam, wood, etc.); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change over the years.
b) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water), as one of the goals of all MCEEC programming is to reduce storm water runoff pollution and improve water quality in the Patapsco River watershed. Activities at MCEEC align with other local initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning the harbor to be swimmable and fishable by 2020. As described in greater detail above, our programs address this with water quality testing, community clean-ups, public outreach about litter and pollution, and "greening" local schoolyards.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. MCEEC and its programs, in partnership with the Maryland Port Administration (MPA), are the cornerstone of a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. To date, over 60,000 tons of debris has been removed from the site, including old appliances, tires, construction waste, and rubble. MCEEC, a designated Urban Wilderness site with 54 acres of land and 70 acres of water, is now providing the first public waterfront access for residents of these South Baltimore communities in generations. In 2013, the MCEEC was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.
(2) Why: a) The goals of environmental education programming at MCEEC include the following: To provide hands-on environmental education programs for approximately 650 Baltimore City students in 2016-17 that meet learning standards and help prepare them for Partnership for Assessment of Readiness for College and Careers (PARCC) testing (through SLURRP) and help reduce summer learning loss (through BEESMART), to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

MCEEC has chosen to focus on these goals for several reasons. Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating and implementing environmental literacy programs in Baltimore City. Urban schools often must travel out of their communities to find these experiences, and students sometimes have difficulty connecting these experiences with their daily life in the city. Also, Baltimore City schools are often financially challenged and burdened with large class sizes, making outdoor experiences difficult or unattainable. Teachers often struggle to implement required curriculum and do not have time or resources to involve students in "extra" projects.

MCEEC programming was developed to address these challenges. For instance, SLURRP directly supports the recommendations of the Chesapeake Bay Agreement and Maryland's Partnership for Children in Nature by bringing relevant environmental education into Baltimore City classrooms, promoting stewardship, and getting city students to interact with and appreciate their local outdoor environment. All MCEEC environmental literacy

programs encourage behavioral change that benefits the environment through hands-on activities that bring students and the community in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings.
b) We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water, because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants are directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. Over the past 30 years, LCF has provided hands-on environmental literacy programs that have successfully encouraged underserved youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each MCEEC program address ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue, think about how their personal actions can affect this problem, and seek and implement solutions.

We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments. Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. MCEEC programs address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.
c) The need for our project is evident in the outcomes delineated in the Education and Outreach section of the revised Chesapeake Bay Watershed Agreement, which include an increase in student understanding of the watershed through teacher-supported Meaningful Watershed Educational Experiences and rigorous inquiry-based instruction, as well as an increase in the number of schools in the region that reduce the impact of their school building and grounds through student-led protection and restoration projects. Also, the Maryland Partnership for Children in Nature states that all Maryland young people should have opportunities to connect with the natural world and grow to become informed and responsible stewards. Key recommendations of the partnership include strengthening students' connection to nature during the school day, and reaching out to underserved communities.

In addition, the US Fish and Wildlife Service Chesapeake Bay Field Office (CBFO) has drafted a wildlife management plan for Masonville Cove that utilizes a landscape management strategy and identifies long-term management goals and strategies for the entire Patapsco River watershed. The landscape conservation approach to Masonville Cove and the Patapsco watershed is one that is reflected in the CBFO strategic plan and is intended to be implemented with a variety of state and federal partners. Finally, in 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project that epitomizes the goals of the Initiative.

(3) How: a) MCEEC management and educational staff and six schools are in place, and program implementation designs are established in order to immediately begin working toward program outcomes once funding is in place (including selecting two additional schools if funded). All MCEEC programs are designed to achieve outcomes using the 5 E's of STEM instruction: Engage (students are introduced to a topic that has real-world relevance to them), Explore (students investigate the problem through research and experimentation), Explain (students relate what they have learned through writing and speech), Extend (students think about how this problem impacts not only their community, but the wider environment and Chesapeake watershed as a whole), and Evaluate (students brainstorm solutions to the problem, articulate their ideas, and consider solutions presented by others).

SLURRP and BEESMART enhance environmental literacy through hands-on experiments that test various forces of nature and reinforce how math and science are integral to the environmental impact of things that people

do on a daily basis. Community programs provide fun and age-appropriate environmental literacy topics and hands-on projects to excite participants' imaginations and introduce them to environmental education. Community talks, environmental festivals, and neighborhood clean-ups are offered for adult residents to help them understand the negative implications of littering and dumping on the environment, both locally and globally, and to show how they can be part of the solution by properly disposing of trash, recycling, and advocating for the community.
b) SLURRP and BEESMART let students use hands-on projects to solve real-world environmental issues that are affecting their community; most notably, reduction of storm water runoff pollution and improving water quality. Students and community members will record and weigh the types of trash and recyclables collected during clean up events, and the numbers and types of shoreline plants that are planted during events. We will also keep track of the number and locations of storm drains stenciled. Water quality testing will be performed and results monitored for changes. By learning about and visibly helping to improve their neighborhoods, students will be encouraged to become leaders and may develop a change in attitude that will grow into a life-long community stewardship.
c) Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing three (3) sub-grantees who will be granted $5,000 each ($15,000 total, or exactly 25% of the $60,000 requested) for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and that also work to improve the Patapsco watershed. We are considering a grant to the National Aquarium Conservation Team for community shoreline plantings in the vicinity of MCEEC to help stabilize the shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for the Hispanic Access Foundation and a local church group, Pathway Church of God, both of whom partnered with us in 2015 to engage the local Latino population in urban environmental education projects including storm drain stenciling, trash collection, and planting milkweed to attract monarchs. Finally, we will approach the local public high school, Ben Franklin High School at Masonville Cove about a sub-grant award that will allow students and teachers to fund an age-appropriate community environmental project. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals of increasing environmental literacy. Prospective grantees will be asked to complete essays describing project goals and objectives and how they align with the EPA's goals and objectives. MCEEC staff will provide oversight on projects conducted by sub-grantees to ensure that they achieve expected outputs and outcomes.
(4) Who: a) Our target audience is South Baltimore residents from Brooklyn/Curtis Bay and Cherry Hill, including underserved 3rd-5th grade students and teachers from eight Title I public schools (~650 students and 16 teachers), and approximately 1,500 community members including toddlers and parents in Saturday programs, and adults of all ages who attend community events. The total number of participants over the year will be approximately 2,200. The communities served reflect income, education, and employment statistics more dire than Baltimore City as a whole. In 2013, median annual household incomes in these areas ranged between $23,918 and $34,420 (compared to the citywide median of $41,385), family poverty rates between 28.7-40.2% (compared to 19.1% citywide), and unemployment rates between 21.2 and 21.9% (compared to 14.2% citywide) (www.bniajfi.org). A third of the adult population (over 25) does not have a high school diploma or GED; less than 10% have attended college. Over 90% of students in these south Baltimore communities are eligible for free or reduced lunches, and chronic absence rates (missing more than 20 days of school) are high, ranging from 19% in elementary school up to 44% in high school. Students to be served are primarily minorities. In Cherry Hill, 96% of public school students are African American, and 2% are Hispanic; in Brooklyn/Curtis Bay, 55.8% of students are African American and 11.9% of students are Hispanic (www.bniajfi.org). Approximately 50% of BEESMART participants are expected to be Hispanic, and a significant Hispanic population is expected to be involved in community events.

Until MCEEC opened, these community residents had little insight or information about the environmental and water quality concerns in their own backyard, which led to the implementation of coordinated school and community outreach programs for these residents. MCEEC programming works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards; this will improve their neighborhoods while encouraging them to become the community's future leaders. Our Community Programs reach out to diverse audiences, from toddlers to adults, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because community residents ultimately hold a responsibility for keeping their neighborhoods clean and reducing their own negative actions that harm the environment. Overall, MCEEC gives South Baltimore residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural, beautiful recreation area if proper environmental actions are taken and maintained.

b) SLURRP recruitment is accomplished through direct contact with school administration and teachers. MCEEC staff will request a meeting at local public schools, introduce SLURRP, and discuss how the program is designed to increase academic skills and PARCC scores, then will develop a schedule with teachers. We have found that schools are often eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation over the last decade. Teachers have the incentive of professional development credits for the school year. BEESMART students will be recruited through SLURRP, as SLURRP educators will use contact time during the school year as an opportunity to promote BEESMART to students in their classrooms and will also disseminate written information about the program and its location/transportation to families in the community and/or will be available to speak to parents who have literacy struggles. Program information will be made available in Spanish as well, because a large percentage of Hispanic families are served by these schools. Students will be selected through a cooperative identification process involving teachers, administrators, BEESMART staff, parents, and students. Youth participating in BEESMART from year to year will have priority to continue in the program over new students, who will be placed on the waiting list.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community via print media and social media, as well as promoting special community events for all ages. Students participating in SLURRP and BEESMART will be encouraged to bring family members to community events. We have also begun to work with the Hispanic Access Foundation (HAF), an organization that works to promote responsible citizenship, educational attainment, and active engagement in improving the health, environment, and financial well-being of Hispanic families throughout the US; locally they are helping MCEEC to partner with Latino groups through local churches. HAF has learned that Hispanics are passionate about their public parks and open spaces. Therefore, environmental conservation ranks high on Latinos' priority list, and HAF will help us attract the growing Latino population in the community to participate in MCEEC programs and events.

(iii) Project Evaluation

(1) MCEEC Programming is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues. Short term outcomes are measured by the number of participants in each program, the number of community programs offered, the weight and types of trash and recyclables collected during community clean-ups, the number and location of storm drains stenciled, and the number of brochures or outreach materials distributed by SLURRP students. The short-term outcomes for sub-grantees are to select the sub-grantee through an application process and work together to put their proposed program in motion.

(2) Medium and long term outcomes are measured by continued participation in SLURRP and MCEEC community programs, the implementation of BEESMART as a summer extension of SLURRP, additional pounds of trash and recyclables collected, and additional storm drains stenciled. A Spring Festival will be held at MCEEC to further promote environmental literacy for students and the community, and will include events such as shoreline plantings and litter collection. Additionally, program participants are surveyed (pre and post-event) about their change in knowledge of urban environmental issues and feelings about stewardship in their community. Water quality will be tested at various points in the program to test the impact of trash collection from school yards and neighborhoods. MCEEC will also record the number of participants in each program. Sub-grantees will be required to submit data indicating the impact of their shoreline plantings/restoration projects, increase in wetland/native plant habitat in the community, and increase in participants' environmental knowledge and attitudes toward stewardship.

The long-term educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student knowledge in the content area and target instruction of SLURRP and BEESMART. The program will measure increases in student academic achievement using activities that align with Maryland College and Career Ready Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about runoff prevention and environmental stewardship. Teachers will complete feedback forms to evaluate academic and social impact on students, the effectiveness of the collaboration, and to provide direction for future efforts. Results will be compiled and compared to determine the impact of the program on participants.

(3) LCF has three decades of experience with successful compliance of federal grants. Our experienced accounting department will work closely with the Program Director to ensure that awarded grant funds and sub-grants are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

Line Item	EPA Funds	Matching Funds	Total Project Cost
Personnel			
Lorraine Warnick, MCEEC Director: 25% of $68,750		$17,188	$17,188
Michelle Koehler, MCEEC Educator: 100% of $40,000 Ask: 66% of $40K for 9 months Oct - June ($40,000 x .66 = $26,400 / 12 = 2200 x 9 = 19800)	$19,800	20,200	$40,000
Julian Whitley, MCEEC Educator: 100% of $30,000 Ask: 60% of $30K for 9 months Oct - June ($30,000 x .6 = 18,000 / 12 = $1,500 x 9 = $13,500	$13,500	16500	$30,000
2 Masonville Educators: 2 x 75% of $35,000		$52,500	$52,500
Weekend Community Educators: 2 x 30% of $30,000		18,000	$18,000
Total Personnel	*$33,300*	*$124,388*	*$157,688*
Fringe @ 12% (FICA, SUTA, Health Insurance)	$3,996	$14,927	$18,923
Supplies			
Program supplies (hand-outs, paints & brushes for stenciling, art supplies for posters, teacher materials) for 2 schools @ $1000 each	905	$1,095	$2,000
			$0
Other			
Sub-awards: 3 grants @ $5000 each	$15,000		$15,000
Subtotal	***$53,201***	***$140,410***	***$193,611***
Indirect Costs @ 18.23%	$6,799	$25,397	$32,196
Grand Total	**$60,000**	**$165,807**	**$225,807**

OK

(b) Detailed Budget

(i)

Line Item	**EPA Funds**	**Non-EPA Funds**	**Total Project Cost**
Personnel			
Lorraine Warnick, MCEEC Director: 25% of $68,750		$17,188	$17,188
Michelle Koehler, Lead SLURRP Educator: 100% of $40,000	$20,000	20,000	$40,000
Julian Whitley, SLURRP Educator: 100% of $30,000	$13,500	16,500	$30,000
2 Masonville Educators: 2 x 75% of $35,000		$52,500	$52,500
Weekend Community Educators: 2 x 30% of $30,000		18,000	$18,000
Total Personnel	*$33,500*	*$124,188*	*$157,688*
Fringe @ 12% (FICA, SUTA, Health Insurance)	$4,020	$14,903	$18,923
Supplies			
Program supplies (hand-outs, paints & brushes for stenciling, art supplies for posters, teacher materials) for 2 schools @ $1000 each	640	$1,575	2,251
Other			
Sub-awards: 3 grants @ $5000 each	$15,000		$15,000
Subtotal	***$53,160***	***$140,666***	***$193,826***
Indirect Costs @ 18.8%	$6,840	$25,356	32,196
Grand Total	**$60,000**	**$166,022**	**$226,022**

(ii) The non-Federal match requirement will be met with funding from Maryland Environmental Services.
(iii) Exactly 25% of the $60,000 request will be awarded as three sub-grants of $5,000 each.
(iv) EPA funding will allow us to meet the costs of serving two more Baltimore City Schools with SLURRP, while six schools will be served with matching funding (for a total of eight schools served).

(c) Appendices

(i) Timeline

October 1, 2016 – September 30, 2017

October 2016

- Acceptance of award
- Correspondence with Baltimore City Public Schools about selection of all participating schools
- Correspondence with potential schools
- Begin selection of subgrantees
- Finalize selection of schools
- Have pre-program meeting with principals and teachers
- Create year-long programming schedule for each school
- MCEEC weekend community education programs

November 2016

- Teacher professional development workshop
- Conduct student pre-program assessment and survey
- Begin preparation phase programming
- Begin tallying teacher feedback forms for each program
- Begin school field programs at MCEEC
- Continue selection of subgrantees
- MCEEC weekend community education programs

December 2016

- Continue preparation phase programming
- School field programs at MCEEC
- Shoreline clean-up event at MCEEC
- Subgrantee selection finalized
- MCEEC weekend community education programs
- Submit Initial Status Report to EPA

January/February 2017

- Complete preparation phase programming, prepare for action phase programming
- Mid-year student assessment and survey
- School field programs at MCEEC
- MCEEC weekend community education programs

March/April 2017

- Action phase programming
- School field programs at MCEEC
- MCEEC Environmental Festival
- Subgrant implementation
- MCEEC weekend community education programs
- Recruitment for BEESMART Summer Program
- Submit 6-month Status Report by end of March 2017

May 2017

- Reflection phase programming
- Conduct student post-program assessment and survey
- Tally all survey and feedback form results
- Conduct end-of-year meeting with teachers
- Shoreline clean-up event at MCEEC

- Subgrant implementation
- MCEEC weekend community education programs

June/July 2017
- BEESMART Summer Program Operates
- Subgrant implementation and finalization

August/September 2017
- Conclude BEESMART Summer Program
- Tally summer programming results
- Submit final grant report after conclusion of grant period

(ii) Logic Model

Outputs	Outcomes		
	Short-term	**Medium-term**	**Long-term**
Management & implementation of education programs in schools and MCEEC	SLURRP outreach programs and MCEEC field experiences for 2 Baltimore City schools (in addition to the six schools served with non-EPA funding—8 total schools served) Collection of trash Storm drains stenciled	Continued outreach to schools Spring Festival at MCEEC BEESMART Summer Program as extension of school year SLURRP Continued reduction of trash in community More storm drains stenciled	Improved environmental literacy and knowledge of storm water runoff issues Change in attitudes regarding pollution Increased attitude of environmental stewardship Significant decrease in trash & runoff pollution in schoolyards and neighborhoods resulting in improved water quality Increase in student achievement through targeted instruction
Planning and implementation of community education programs at MCEEC	Community education programs at MCEEC operate on regular schedule	Increased participation in community events at MCEEC Spring Festival at MCEEC	Increased community awareness of local land use and environmental issues Increased environmental stewardship Increased community visitation to MCEEC as a community resource
Field trips	Fourth and fifth grade field trips to MCEEC	Improved knowledge of local environmental issues and potential action steps towards solutions	Change in attitudes regarding pollution Increased attitude of environmental stewardship Increase in student achievement through targeted instruction
Promote Programs and Events at MCEEC	Creation of brochures	Distribution of brochures; regular updates to SLURRP website	Increased attendance at community events
Sub-grants to partnering entities	Determine sub-grantees Creating partnerships to further the environmental education goals	Shoreline planting projects Native plantings and restoration projects Latino Community Environmental Outreach	Improved environmental literacy and knowledge of urban environmental issues Change in attitudes regarding pollution Increased environmental

		High school partnership projects	stewardship, especially in the local Latino community Increased wetland and native plant habitat resulting in improved water quality ✓

(iii) Programmatic Capability and Past Performance

Organizational Experience and Capacity

Living Classrooms Foundation (LCF) has a long history of completing projects and achieving the stated goals of each. We have an excellent reputation for yielding quality results and adhering to the requirements of grants and agreements from diverse funding streams, both government and private sector (please see below for details).

Living Classrooms Foundation was established in Baltimore, Maryland in 1985. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 44,000 students a year enrolled in diverse programs that take place on Living Classrooms' campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships. For over 30 years, Living Classrooms has been a leader in education, workforce development, and positive social change in the Baltimore-Washington region, earning local and national recognition for our results. Living Classrooms Foundation addresses head-on some of the most challenging issues affecting disadvantaged children and young adults, and believes that every student, even those residing in distressed communities, can reach his or her potential if provided a continuum of resources and quality programming that is effective and structured.

Living Classrooms offers a distinctive competency in experiential learning—literally learning by direct experience, or what the Foundation calls "learning by doing." We apply our skill in three program areas: 1) Educating students through our own charter school, through after-school and supplemental education programs, and through environmental experiences, with special emphasis on serving students who are disadvantaged or live in high-risk environments; 2) Eliminating barriers to success for young adults and families, especially those living in poverty, through community development, workforce preparation, and life skills training; and 3) Educating the general public, and students in particular, about the significance of the region's maritime heritage and its role in shaping who we are as a community and nation.

In 2009, LCF joined with the Maryland Port Administration (MPA) to become the lead educational and operational partner of the Masonville Cove Environmental Education Center (MCEEC), a unique, urban nature facility located along the Patapsco River's Middle Branch. The Center currently includes a "green" building with science labs, over 50 acres of land, 70 acres of water, picnic areas, a bird sanctuary, hiking trails, a pier, and several tidal and non-tidal wetland projects. Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC hosts the annual Masonville Cove Environmental Festival, and has become a hub where SLURRP schools can learn more about the nature of their urban environment while participating in various restoration projects. To date, MCEEC has served 14,568 students and 670 teachers with educational outreach and community environmental programming, and in 2013, the site was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

LCF has been very successful in operating educational programs and schools as well. Our experience with providing successful out-of-school time programming for youth is extensive. Our CARE (Comprehensive Academic, Recreation, and Enrichment) After School/Summer Program serves low-income youth in East Baltimore, and has consistently exhibited positive results since it began in 2006. In the 2014-2015 school year, 88% of students in CARE improved by one letter grade in Math, and 93% improved by one letter grade in Literacy/Language Arts. 82% missed fewer than 10 days of school. In addition, our BUGS (Baltimore Urban Gardening with Students) After School Program has served at-risk youth with academic enrichment based on environmental horticulture for the past 16 years. It has become a national model program and was awarded the 2009 William S. White Program of Distinction Award by the US Department of Education. In 2014-15, The Crossroads School (a Baltimore City

charter middle school operated by Living Classrooms) was a top performing City middle school: 88% of students ended the year with a GPA of 70% or higher, 58% with a GPA of 80% or higher, and 16% with a GPA of 90% or higher (percentages of 4.0 GPA). Living Classrooms led a successful restructuring of Commodore John Rodgers, a Baltimore City elementary/middle school that was selected as a "turn-around" school in 2010 due to poor academic performance; Living Classrooms staff has not only led this to becoming the top performing turn-around school in the City, but the school has tripled its enrollment and also become competitive with the City's higher performing schools in standardized tests and student grades.

Living Classrooms Foundation currently operates on an annual $15 million budget. The Foundation has a long track record of compliance and fiscal responsibility with federal, state, local, corporate and foundation grants ranging up to and over $1,000,000. Major sources of funding have come from the Harry and Jeanette Weinberg Foundation, Under Armour, the W.K. Kellogg Foundation, the Steve and Renee Bisciotti Foundation, the Cal Ripken Sr. Foundation, the Open Society Institute, Joe and Debra Weinberg, and Constellation Energy. Living Classrooms Foundation also receives funding from the US Departments of Labor, Education, Health and Human Services, Justice, and Interior; the State of Maryland; and City of Baltimore.

Staff Qualifications & Key Personnel

Living Classrooms Foundation is operated by a permanent staff of 243; this number grows to over 300 during summer programs. Leadership is provided by James Piper Bond, President and CEO, Nicole Ruocco-CFO, Thara Taylor-Vice President of Development and Communications, Bill Cunningham-Vice President for Government Relations, Steve Bountress-Vice President for Workforce Development, Scott Raymond-Vice President for Education, and Christopher Rowsom-Vice President for Maritime Heritage Programs. These staff members have been with Living Classrooms for periods ranging from eight to twenty-eight years with one exception--CFO Nicole Ruocco joined the staff in 2013.

Key staff members that are directly involved in managing and implementing the environmental education programming at MCEEC are Christine Truett, LCF's Director of Education; Lorraine Warnick, Director of the MCEEC, and Christine Redline, Assistant Director of the MCEEC and Director of BEESMART. Ms. Truett has worked with Living Classrooms Foundation for 23 years, starting as a shipboard environmental educator, and moving up to Assistant Director of Education and later Director of Education, a position she has held since 2000. Ms. Truett holds a BS in biology from Mary Washington College. She has extensive experience in directing environmental education programs, including oversight of environmental education programming at MCEEC, and has an excellent track record of successfully operating programs using federal, state, and private funding. She will be in charge of program oversight, including grants management and reporting.

Ms. Warnick began working at Living Classrooms Foundation as a shipboard educator in 1997. She has since been a Program Director, Director of Environmental Education, and in 2009 became the Director of the MCEEC. Ms. Warnick holds a BS in Biological Sciences from the University of Maryland, and a MS in Environmental Science and Policy from Johns Hopkins University. She is responsible for the oversight of the programs discussed within this application, and has extensive experience implementing grants, managing budgets, grant reporting, and program evaluation. Ms. Warnick will ensure that all program curricula meets the educational and environmental outcomes of the proposed programming.

The Assistant Director of the MCEEC is Ms. Christine Redline. Ms. Redline holds a Bachelor's Degree in Environmental Studies from Washington College in Chestertown, MD, and a Master of Science Degree in Environmental Education from Lesley University in Cambridge, MA. She began working with Living Classrooms Foundation as an Outreach Educator for the SLURRP program in 2006, became the Education Supervisor at MCEEC in 2008, and since 2014 has served as the Assistant Director of MCEEC. She is also the Director of the BEESMART Program. Ms. Redline is experienced in providing environmental education programming that aligns

with Maryland's College and Career Ready educational standards, and Environmental Literacy standards, coordinates programs and field trips, and trains volunteers and interns in the best practices of environmental education. Ms. Redline was previously an environmental educator at Denison Pequotsepos Nature Center in Mystic, CT and Echo Hill Outdoor School in Worton, MD. She has experience with providing environmental education to inner city youth in underserved communities. All of the staff members that she oversees are well trained to effectively provide SLURRP, BEESMART and other community programs in such a way that they have maximum impact on the participants. Ms. Redline will ensure that programs are being operated to meet the proposed educational and environmental outputs and outcomes.

SLURRP is led by Ms. Michelle Koehler, Lead Educator at MCEEC. Ms. Kohler holds a BA Degree from Towson University, and has been an educator at Living Classrooms Foundation since 1997, directing a variety of after school and summer programs. She has extensive experience in successfully leading hands-on environmental education programs for students, as well as with grants management and reporting. Ms. Koehler is also the Assistant Director of the BEESMART program. She will ensure that all program curriculum is being presented properly to students and appropriately assessed by MCEEC educators and classroom teachers.

Previous Federally Funded Assistance Agreements

Over the past 30 years, Living Classrooms Foundation has received countless federally funded assistance agreements from such diverse agencies as the United States Departments of Education, Justice, Labor, Health and Human Services, and Interior; and NOAA. Living Classrooms has also received previous EPA grants, in 1997, 2004, and 2014. The projects that resulted from all of these funding agreements were successful, completed within the proposed time frame, and reported on within the required parameters of each individual agreement. Grant details for the past three years are as follows:

EPA-EE Grant (2014-15) Assistance # NE-963298-01-0: In 2014, Living Classrooms Foundation was awarded a $75,000 grant through the EPA EE Grant Program (Opportunity Number EPA-EE-13-01, CFDA Number 66.951) for Masonville Cove Environmental Education Programming. This is the same programming that we are expanding upon for the current request. LCF has completed and managed this grant agreement successfully; all interim reports were submitted complete and on time, with the final report being submitted on March 31, 2016. Funding was used as proposed to implement the SLURRP environmental education initiative in three South Baltimore schools and conduct community engagement events that served 1,494 residents of all ages. Four sub-grants were successfully awarded to The National Aquarium in Baltimore's Conservation Team to construct a floating footbridge over wetlands at Fort McHenry National Monument and Historic Shrine; Ben Franklin High School at Masonville Cove to support citizen science, environmental activities, and agricultural programming at the school; Lakeland Elementary/Middle School to help support their Outdoor Ecology Classroom, which includes a greenhouse with planting tables, stream tables, and keyhole gardens, which use food waste from the cafeteria to create compost for growing plants; and Pathway Church of God, a neighborhood church that planted an aesthetically pleasing, low-maintenance milkweed garden, the planning and construction of which educated community members about native plants and run off mitigation, and helped to instill a sense of environmental stewardship in the local community. These projects were completed as proposed; however a three-month funding extension was requested and granted due to the sub-grantees needing additional time to fully and properly execute their programs.

NOAA B-WET (2012-2015): Within the past three years, a relevant project that is similar in size and scope that has been completed with a federal funding agreement is a grant from NOAA's B-WET environmental education program for the SLURRP initiative referenced in this application. Living Classrooms Foundation has received a continuous series of these NOAA grants since the inception of B-WET in 2002. The most recent of these was a 3-year grant awarded in 2012 ($120,000 per year, $360,000 total). Year 1 took place from July 2012 - June 2013, Year 2 took place from July 2013-June 2014, and Year 3 took place from July 2014-June 2015. LCF competently executed the activities funded by all three years of the B-WET grant agreements, and met the stated objectives of the

agreements. We punctually reported to NOAA on the achievement of program outcomes and outputs, and reports were submitted in a timely fashion according to the schedule presented in the grant agreements.

Lakeland Elementary Middle School #012

"Respectful, Responsible, Ready"

With enthusiasm, dedication, and patience, we create a safe learning community, full of opportunities, that challenge all individuals in our Lakeland family to explore, grow, and achieve.

April 5, 2016

Ms. Lorraine Andrews Warnick

Living Classrooms Foundation

Director, Masonville Cove Environment Education Campus

1000 Frankfurst Ave

Baltimore, MD 21226

On behalf, of Lakeland Elementary/Middle School, I am writing in support of the Masonville Cove Environmental Education Center (MCEEC) programs. Our second, third, fourth, and fifth grade students have been participating in various Living Classrooms programs including BEESMART (Baltimore Environmental Education Summer Math And Reading Trailblazers), as a continued partnership that has lasted over ten years with our school. The lessons have been well organized and have engaged students as active participants in the learning process. The hands-on activities are excellent reinforcements of our science curriculum and provide opportunities that are largely unavailable due to limited school funds. The programs also supplement classrooms curriculum in social studies by teaching about the geography of Maryland and help support math objectives by applying real world skills. Lakeland teachers have also benefitted from and will continue to participate in Living Classrooms professional development workshops that provide activities and lesson plans that can be integrated into classroom teaching.

Living Classrooms' MCEEC educators consistently impress me with their knowledge of content and their ability to manage student behavior, while delivering rich and engaging lessons. Their passion for the environment and teaching children is always evident. Through MCEEC, our students have learned about storm water pollution via the hands-on runoff model, studied and created watershed models, and learned about the Chesapeake Bay and the important habitats that can be found there. The students have been active participants in their neighborhoods by picking up trash, stenciling local storm drains, making informational brochures to distribute to the community, and working with your staff on the design and implementation of our very own Lakeland School Garden. The students have been provided with multiple opportunities to go on field trips to your urban nature center and experience Baltimore and its surrounding areas.

Lakeland is committed to continuing this partnership. The MCEEC is an invaluable resource for the students and teachers of Lakeland and Baltimore City. Our students receiving these lessons are gaining the background knowledge necessary to ensure that they are on track to meet their high school environmental literacy graduation requirements. I consider my students, the school community, and myself very lucky to be able to participate in such an enriching program.

Sincerely,

Najib Jammal

Principal

Najib Jammal,, Principal • LaJuan Alston, Resident Principal • Luis Espinoza,, Assistant Principal
2921 Stranden Rd, Baltimore, MD 21230 Phone (410) 396-1406 Fax (410) 396-0015
http://www.baltimorecityschools.org/Page/2374 Title I Schoolwide School

Maree G. Farring
Elementary - Middle School

300 Pontiac Avenue
Baltimore, MD 21225
410-396-1404

Mrs. Lorraine Warnick
Masonville Cove Environmental Education Campus
1000 Frankfurst Ave
Baltimore, MD 21226

Dear Mrs Warnick:

I am writing this letter as an indication of our schools strong support for the programs, such as SLURRP and BEESMART, that Living Classrooms offers out of the Masonville Cove Environmental Education Campus. Living Classrooms educators have been doing work with our school for over ten years. We have found your staff to be professional, well prepared, and excited about the environmental science content they present. Their excitement is mirrored in the excitement shown by the students during their interactions and presentations. This offers pivotal support to our classroom instruction by engaging students on topics and offering an experience that we simply cannot offer in the traditional classroom setting. Additionally, our teachers benefit from and will continue to participate in Living Classrooms professional development workshops that provide activities and lessons that can be directly integrated into classroom teaching.

Living Classrooms helps fulfill our need for Environmental Literacy for students in grades three, four and five by offering a multi-tiered experience: multiple classroom outreaches per year including activities in our own schoolyard, fieldtrips to the Masonville Cove Environmental Education Campus where students can see their connections to the local and global waterways first-hand, and STEM-based summer programs. Environmental education is very important to our students for several reasons including the following:

1. Science education is secondary to Math and Language Arts, thus many students are missing the Science fundamentals (Masonville lessons provide environmental education/geography).
2. The Patapsco River is near our school. Students are exposed to natural resources that are near their homes. The conservation of the river has a deep impact on their homes and community.

In conclusion, I believe Masonville Cove and Living Classrooms are providing a needed educational experience for students, exposing them to environmental education and environmental concerns making our science instruction tangible and meaningful to them. More students should be exposed to their good work and commitment. Maree G. Farring Elementary Middle School is ready to continue this partnership for many years.

Most Sincerely,

Mr. Ben Crandall
Principal
Maree G. Farring Elem/Middle

(a) Work Plan:

(i) Project Summary

(1) Organization and Partnerships: Living Classrooms Foundation (LCF) is a Baltimore-based 501(c)(3) educational organization that strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 30 years, LCF has provided experiential environmental education to a wide variety of audiences, with a special emphasis on serving at-risk youth. Our environmental education programs are headquartered at the Masonville Cove Environmental Education Campus (MCEEC) in South Baltimore, and are managed by MCEEC Director Lorraine Warnick. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. Key partners are the Baltimore City schools participating in MCEEC programming, as they assist with curricular alignment, program implementation, and professional development.

(2) History of Receiving EE Grants: In 2014, LCF received an EPA-EE Grant for the MCEEC Environmental Education programming proposed within this application. However, with the funding requested for 2016-17, we are expanding upon the previously funded programs with the addition of BEESMART (Baltimore Environmental Education Math and Reading Trailblazers), which enhances and extends one of MCEEC's major environmental education initiatives, SLURRP (School Leadership in Urban Runoff Reduction Project) into the summer for students who participated in SLURRP during the previous school year. In addition, we will use EPA-EE funds to expand SLURRP into two more Baltimore City schools during the 2016-17 school year to reach greater numbers of youth and teachers (for a total of eight schools served).

(3) Goals and Objectives: Program goals are: 1) involvement of two additional schools in the SLURRP environmental education initiative during 2016-17; 2) extension of SLURRP participants' learning into summer 2017 through BEESMART; and 3) Community Engagement events including weekend environmental education programming for families, evening presentations for adults, regular on-site guided walks, and a spring environmental festival. Program objectives are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the community, provide an awareness of land use and local environmental issues, and to create behavioral change in regards to both education and environmental literacy. Academically, students will exhibit increases in achievement as they complete program activities. These goals and objectives meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities focused on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused learning standards. Community programs educate residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, littering, recycling, and water conservation, among others.

(4) Priorities: MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in family education programs and stewardship activities. The project also addresses EPA Environmental Priority 4 (Protecting Water), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has previously been identified by the Maryland Department of the Environment as having high levels of contaminants.

(5) Local Relevance: Programming takes place at MCEEC, 1000 Frankfurst Avenue, Baltimore, MD 21226, and in South Baltimore public schools, all located within the Patapsco River watershed, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. MCEEC is an approved Baltimore Urban Waters Initiative project.

(6) Implementation: MCEEC programs are implemented through year-long outreach lessons that provide a sustained experience in schools, hands-on field trips for school youth, a 5-week summer program, on-site weekend programs, and community events. Sub-grants will be awarded to entities that will enhance our environmental literacy programs in local schools and/or implement community environmental events for families or adults.

(7) Audience: Programming will serve South Baltimore residents, including ~650 3rd-5th grade students and 16 teachers from Title I public schools, and ~1,500 community members from toddler to adult. Many participants are low-income and/or minorities (particularly Latino), as described in section 4a below.

(8) Costs: The main types of expenses that will be requested from EPA include salaries, fringe benefits, program supplies, indirect costs, and the required sub-awards to other organizations (three sub-grants of $5,000 each).

(ii) Detailed Project Description

(1) What: **a)** The proposed project will include implementation of several key programs that make up the MCEEC's overall environmental education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for two Baltimore City schools (in addition to the six currently being served with other funding sources); 2) BEESMART, a five-week summer program that extends and expands the SLURRP concept into the summer months to help participating students retain academic skills while participating in environmental education; and 3) Community Engagement events and programs that engage residents of all ages in environmental literacy activities. SLURRP and BEESMART fulfill EPA Educational Priority 2 (Educational Advancement) by providing formal hands-on environmental literacy programs to students that advance their knowledge of environmental science and issues and align with Maryland's College and Career-Ready educational standards, Maryland Environmental Literacy Standards, and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. Community Engagement events fulfill Educational Priority 3 (Community Projects) by using interactive stewardship activities, including community clean-ups and shoreline plantings, as a hook to attract diverse audiences to the center for environmental education. Program implementation is as follows:

- **SLURRP**: This well-established curriculum and proven Meaningful Watershed Educational Experience (MWEE) has been providing hands-on environmental education to Baltimore City youth in grades 4 and 5 since 2002. Currently we are serving six schools, but this grant would allow us to expand our reach to two additional underserved city schools. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. Through five outreach programs and one trip to MCEEC, students use critical thinking, observation, and data collection to answer the question, "What is storm water runoff pollution, and how can we help prevent it?" The program targets critical connections between environmental science, reading, writing, and math. During the year-long program, MCEEC educators visit each participating school three times and guide 4th and 5th grade students through preparation, action, and reflection phases; teachers are trained to lead an additional two outreach programs in their classroom/schoolyard, for a total of five school-based outreach programs during the year. Programming occurs primarily on school grounds and in the immediate community. All students also participate in one field experience at the MCEEC, where they engage in hands-on learning and restoration activities. Teachers participate in one professional development workshop, as well as ongoing conversations with SLURRP educators regarding student action steps and environmental awareness.

4th Grade SLURRP Activities: In the first preparation program for 4th grade students, "What is a Watershed?," MCEEC instructors visit schools and engage students in an interactive, multimedia presentation that introduces the general concepts of a watershed and runoff pollution. Students investigate how land use affects runoff by working with a hands-on enviroscape model and grade-appropriate worksheets that emphasize reading and writing. Students also receive watershed maps and work with the interactive watershed model so that they can understand that they are part of a larger ecological system and that runoff pollution is a regional concern. They will then identify sources of pollution in their community. At the end of the first outreach, teams of students will be assigned with surveying parents and neighbors about runoff and attitudes towards littering.

Building on their newfound knowledge of runoff pollution, the second MCEEC-led outreach addresses Storm Drains and Sewers. Students learn the difference between the two: how sewers direct water to wastewater treatment plants to be cleaned, but storm drains send water straight back into the watershed with everything that it has collected along the way. Students discuss where water goes when it falls on an impervious surface compared to a pervious surface. Using microscopes, they compare and contrast water samples of rainwater taken from their school's parking lot with water samples that have traveled through the culvert at Masonville Cove. These activities should lead them to conclude that pollution on their schoolyard affects water quality for the whole region.

The third MCEEC-led outreach activity, "Future Environmental Engineers" is designed to help students understand and demonstrate the role of engineering in environmental protection. Students watch a video of outfall at Masonville Cove during a rainstorm, then work together to answer these questions: Using what we have learned about runoff, impervious and pervious surfaces, plants, and storm drains and sewers, how can this be prevented in the future? How can we slow this water down and make sure trash is not entering our water? Students are provided with household materials and asked to design and build a trash interceptor model that will be tested in real-world trials along with models made by students at other schools to see which one prevents more trash from entering the watershed. When students visit MCEEC, they will be able to watch construction of a full-scale "real life" trash interceptor being installed by the Maryland Port Administration at the Masonville Cove outfall just downhill from the Education Center on the campus. This will provide an excellent example to demonstrate the real world

implications of what they are learning in SLURRP.

Through these first three outreach programs, students come to understand that trash on the city streets will ultimately end up in the Chesapeake Bay or one of its tributaries. To help prevent this, the first teacher-led 4th-grade outreach is an action step in the form of a neighborhood trash clean-up. MCEEC staff will provide teachers with gloves, trash bags, and scales for measuring amounts of trash collected, and instructions for leading students through the activity, including proper disposal of trash and recyclables collected. Students will record data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.

The second teacher-led outreach will be "Missing Creatures in Maryland." Students will learn how storm water runoff and land degradation has threatened some of Maryland's most unique and valuable wildlife, like the hellbender salamander. They will propose ways to save these important species by creating a "MISSING" poster to be displayed in their schools, and will present what they have learned to other students, to help spread the knowledge that human activities are negatively affecting animal life in the Chesapeake Bay watershed.

As an additional outreach, 4th grade students will take a field trip to participate in environmental education activities at MCEEC. This allows students to reflect on all that they have learned during the SLURRP experience by seeing the watershed in action. Field trip activities are richly structured, STEM-based learning experiences that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. By conducting projects and experiments at the edge of the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. This reflection activity synthesizes all the information that students have learned and explored together: an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.

5th grade SLURRP Activities: During the first 5th grade SLURRP outreach, students will recap what they have previously learned in SLURRP regarding the Chesapeake Bay and the role students play in their communities in relationship to the Bay (these will be students that participated in SLURRP during the previous year with other funding sources). Using their previous knowledge, the first MCEEC-led activity of the year is to create a "Schoolyard Report Card." SLURRP staff, students, and teachers will walk the entire area of their schoolyard and survey and identify amounts of impervious surface or other problem areas that contribute to storm water runoff. They will grade the schoolyard on elements such as amounts of green space vs. asphalt, and areas where trash is prone to collect. They will discuss improvements they can make so that their schoolyard can more positively impact the condition of the Chesapeake Bay.

The Schoolyard Report Card preparation phase will lead into the next outreach, "Storm Drain Mapping." Building on what they have learned, students will understand that runoff pollution within any part of a watershed can affect areas downstream of the source of that pollution. Students will be able to comprehend the concepts of sub-watersheds by using GPS units to map elevations on their schoolyard, including all of the storm drains on the school property and surrounding area. They will identify land use near the storm drains, and assess the potential pollutants that may contribute to storm water runoff.

The first teacher-led outreach will have students creating a brochure educating the community about storm water runoff. The Center for Watershed Protection's "Teacher's Guide for Creating a Water Monitoring Program" is used as a reference for this project. With the help of carefully constructed worksheets, students will create informational brochures to be distributed to the residents of the community where storm drain stenciling will occur. The brochures contain information on where the storm drains empty, and the importance of keeping the drains clear of trash and other pollutants. The brochure will notify the community that the students will be out stenciling storm drains, explain why it is being done, and provide tips for residents to reduce storm water runoff on their own.

Following creation of the brochure will be a "Storm Drain Stenciling/Community Clean-Up" action project. Throughout this activity, students are challenged to analyze the flow of storm water on their campus and make note of any problem areas, such as regions of the street or schoolyard that flood during rain events. Students then review storm drain maps from the Baltimore Department of Public Works and try to locate the outfall locations for the storm drains in their neighborhood so that they can see where their storm water ultimately goes. With this knowledge, students are able to understand why they should complete the action step of stenciling storm drains. Under the supervision of MCEEC staff, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump"; after stenciling is complete, they will conduct a community clean-up.

The second teacher-led outreach will be another action step: "Redesign Your Schoolyard." Using the information gleaned during the preparation phase at the start of the school year, students and teachers will work together to create a multi-year planting design of a functional and aesthetically pleasing green area unique to each

school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property. Through professional development, teachers will be encouraged to seek funding for implementation of these designs. These designs may be implemented and expanded in future years with additional plantings and wildlife habitat enhancements, such as birdhouses and butterfly gardens. SLURRP-trained teachers will help students and school representatives to develop and incorporate environmentally friendly maintenance strategies, such as limited use of pesticides and fertilizers. Students will synthesize all that they have learned about storm water runoff and how to prevent it with their designs and will create posters and blueprints that they will present to their classmates.

The 5th grade reflection phase will include participation in the annual Masonville Cove Environmental Festival, during which students will reflect on their SLURRP experiences while planting native species, picking up litter, composting their lunch waste, and learning about native wildlife. They also have the opportunity to speak with representatives from a variety of local environmental organizations who host stations addressing urban runoff pollution and what people can do to help prevent it, which provides a direct link to their work throughout SLURRP.

As part of SLURRP, integrated professional development for classroom teachers will be delivered, with the result that teachers will be able to actively lead two outreach programs. The professional development will familiarize teachers with the SLURRP environmental content, help them reinforce academic instruction in areas of student need, and strengthen the continuity between SLURRP subjects and required content standards. LCF's SLURRP staff will provide training and materials that will prepare teachers to lead two of the five outreach programs on their own in their classrooms/schoolyards, including action and reflection phases. This is a change from our past years of SLURRP implementation, in which LCF staff provided an entire package of programming for the entire year and conducted all outreach programs. However, with Maryland's new Environmental Literacy graduation requirement, we are placing a focus on helping prepare teachers with the expertise necessary for them to incorporate and reinforce the appropriate environmental science standards necessary to meet classroom STEM and literacy outcomes and align programming with Next Generation Science Standards. We hope that by giving ownership of a portion of the program to the teachers, that they will be encouraged to be environmental role models for their students. Throughout the year, teachers will also engage in discussions regarding SLURRP participation, which will allow SLURRP staff and teachers to self-assess their instruction around their students' performance.

- **BEESMART**: This 5-week full-day summer program for rising 3rd-5th graders uses E-STEM projects related to real-world local environmental problems as a vehicle for students to retain reading and math levels throughout the summer. The program will serve 60 students who either participated in SLURRP during the previous school year, or who will participate in SLURRP in upcoming years, and therefore further enhances and expands environmental science education for youth through the summer. This creates a continuity of learning from school year to summer that is expected to have a significant impact on the achievement levels of participants, in environmental literacy as well as reading. This continuity will also be advantageous as students continue on in school and will be better prepared to meet Maryland's Environmental Literacy graduation requirement.

BEESMART operates at MCEEC and on the campus of two Baltimore City public schools. Each morning, students receive one and a half to two hours of academic instruction including small-group coaching sessions with a Reading Specialist and Educator-led STEM lessons (on some days these will occur onboard LCF's historic buyboat Mildred Belle). After lunch, students will be engaged in a literacy-focused lesson infused with one of the five weekly STEM themes: Healthy Environment, Healthy Water, Healthy Habitat, Healthy Food, and Masonville Memories. Afternoons will be filled with a variety of hands-on STEM-focused academic and enrichment activities.

During BEESMART, students have the unique opportunity to build NOAA-designed underwater Remotely Operated Vehicles equipped with cameras, called Aquabotz, which support student investigations into underwater areas that are not otherwise accessible. Students also learn computer and resource analysis skills as they research topics to solve a problem, and are introduced to tablet use as they investigate the impact of litter on land and water, study water quality, and explore topics such as decomposition. They use their skills and imaginations to solve local environmental problems caused by improper trash disposal and illegal dumping. The following activities will occur multiple times within the program: Service Learning projects (i.e neighborhood and watershed clean-ups, storm drain stenciling), Computer Lab E-STEM research, and activities chosen by students.

- **Community Engagement Programs**: LCF will plan, develop, and implement free community environmental literacy events for South Baltimore residents. Community Education Coordinators will plan, advertise, conduct, and track an average of five community education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with local churches and community groups to create new opportunities for community participation on the Masonville Cove Campus. For example, in the coming year, we

will be working with the Hispanic Access Foundation and a local church group to develop volunteer opportunities and outreach programs for the growing Latino population in the community.

Weekend programs for younger children and their families may include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban neighborhoods and encourage them to take part in the free community activities that are offered. In addition, free Guided Walks with a Maryland Master Naturalist are offered regularly, weather permitting.

Finally, MCEEC will host bi-annual community shoreline clean-up events in the spring and fall. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, styrofoam, wood, etc.); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change over the years.
b) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water), as one of the goals of all MCEEC programming is to reduce storm water runoff pollution and improve water quality in the Patapsco River watershed. Activities at MCEEC align with other local initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning the harbor to be swimmable and fishable by 2020. As described in greater detail above, our programs address this with water quality testing, community clean-ups, public outreach about litter and pollution, and "greening" local schoolyards.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. MCEEC and its programs, in partnership with the Maryland Port Administration (MPA), are the cornerstone of a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. To date, over 60,000 tons of debris has been removed from the site, including old appliances, tires, construction waste, and rubble. MCEEC, a designated Urban Wilderness site with 54 acres of land and 70 acres of water, is now providing the first public waterfront access for residents of these South Baltimore communities in generations. In 2013, the MCEEC was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.
(2) Why: a) The goals of environmental education programming at MCEEC include the following: To provide hands-on environmental education programs for approximately 650 Baltimore City students in 2016-17 that meet learning standards and help prepare them for Partnership for Assessment of Readiness for College and Careers (PARCC) testing (through SLURRP) and help reduce summer learning loss (through BEESMART), to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

MCEEC has chosen to focus on these goals for several reasons. Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating and implementing environmental literacy programs in Baltimore City. Urban schools often must travel out of their communities to find these experiences, and students sometimes have difficulty connecting these experiences with their daily life in the city. Also, Baltimore City schools are often financially challenged and burdened with large class sizes, making outdoor experiences difficult or unattainable. Teachers often struggle to implement required curriculum and do not have time or resources to involve students in "extra" projects.

MCEEC programming was developed to address these challenges. For instance, SLURRP directly supports the recommendations of the Chesapeake Bay Agreement and Maryland's Partnership for Children in Nature by bringing relevant environmental education into Baltimore City classrooms, promoting stewardship, and getting city students to interact with and appreciate their local outdoor environment. All MCEEC environmental literacy

programs encourage behavioral change that benefits the environment through hands-on activities that bring students and the community in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings.
b) We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water, because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants are directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. Over the past 30 years, LCF has provided hands-on environmental literacy programs that have successfully encouraged underserved youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each MCEEC program address ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue, think about how their personal actions can affect this problem, and seek and implement solutions.

We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments. Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. MCEEC programs address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.
c) The need for our project is evident in the outcomes delineated in the Education and Outreach section of the revised Chesapeake Bay Watershed Agreement, which include an increase in student understanding of the watershed through teacher-supported Meaningful Watershed Educational Experiences and rigorous inquiry-based instruction, as well as an increase in the number of schools in the region that reduce the impact of their school building and grounds through student-led protection and restoration projects. Also, the Maryland Partnership for Children in Nature states that all Maryland young people should have opportunities to connect with the natural world and grow to become informed and responsible stewards. Key recommendations of the partnership include strengthening students' connection to nature during the school day, and reaching out to underserved communities.

In addition, the US Fish and Wildlife Service Chesapeake Bay Field Office (CBFO) has drafted a wildlife management plan for Masonville Cove that utilizes a landscape management strategy and identifies long-term management goals and strategies for the entire Patapsco River watershed. The landscape conservation approach to Masonville Cove and the Patapsco watershed is one that is reflected in the CBFO strategic plan and is intended to be implemented with a variety of state and federal partners. Finally, in 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project that epitomizes the goals of the Initiative.
(3) How: a) MCEEC management and educational staff and six schools are in place, and program implementation designs are established in order to immediately begin working toward program outcomes once funding is in place (including selecting two additional schools if funded). All MCEEC programs are designed to achieve outcomes using the 5 E's of STEM instruction: Engage (students are introduced to a topic that has real-world relevance to them), Explore (students investigate the problem through research and experimentation), Explain (students relate what they have learned through writing and speech), Extend (students think about how this problem impacts not only their community, but the wider environment and Chesapeake watershed as a whole), and Evaluate (students brainstorm solutions to the problem, articulate their ideas, and consider solutions presented by others).

SLURRP and BEESMART enhance environmental literacy through hands-on experiments that test various forces of nature and reinforce how math and science are integral to the environmental impact of things that people

do on a daily basis. Community programs provide fun and age-appropriate environmental literacy topics and hands-on projects to excite participants' imaginations and introduce them to environmental education. Community talks, environmental festivals, and neighborhood clean-ups are offered for adult residents to help them understand the negative implications of littering and dumping on the environment, both locally and globally, and to show how they can be part of the solution by properly disposing of trash, recycling, and advocating for the community.
b) SLURRP and BEESMART let students use hands-on projects to solve real-world environmental issues that are affecting their community; most notably, reduction of storm water runoff pollution and improving water quality. Students and community members will record and weigh the types of trash and recyclables collected during clean up events, and the numbers and types of shoreline plants that are planted during events. We will also keep track of the number and locations of storm drains stenciled. Water quality testing will be performed and results monitored for changes. By learning about and visibly helping to improve their neighborhoods, students will be encouraged to become leaders and may develop a change in attitude that will grow into a life-long community stewardship.
c) Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing three (3) sub-grantees who will be granted $5,000 each ($15,000 total, or exactly 25% of the $60,000 requested) for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and that also work to improve the Patapsco watershed. We are considering a grant to the National Aquarium Conservation Team for community shoreline plantings in the vicinity of MCEEC to help stabilize the shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for the Hispanic Access Foundation and a local church group, Pathway Church of God, both of whom partnered with us in 2015 to engage the local Latino population in urban environmental education projects including storm drain stenciling, trash collection, and planting milkweed to attract monarchs. Finally, we will approach the local public high school, Ben Franklin High School at Masonville Cove about a sub-grant award that will allow students and teachers to fund an age-appropriate community environmental project. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals of increasing environmental literacy. Prospective grantees will be asked to complete essays describing project goals and objectives and how they align with the EPA's goals and objectives. MCEEC staff will provide oversight on projects conducted by sub-grantees to ensure that they achieve expected outputs and outcomes.
(4) Who: a) Our target audience is South Baltimore residents from Brooklyn/Curtis Bay and Cherry Hill, including underserved 3rd-5th grade students and teachers from eight Title I public schools (~650 students and 16 teachers), and approximately 1,500 community members including toddlers and parents in Saturday programs, and adults of all ages who attend community events. The total number of participants over the year will be approximately 2,200. The communities served reflect income, education, and employment statistics more dire than Baltimore City as a whole. In 2013, median annual household incomes in these areas ranged between $23,918 and $34,420 (compared to the citywide median of $41,385), family poverty rates between 28.7-40.2% (compared to 19.1% citywide), and unemployment rates between 21.2 and 21.9% (compared to 14.2% citywide) (www.bniajfi.org). A third of the adult population (over 25) does not have a high school diploma or GED; less than 10% have attended college. Over 90% of students in these south Baltimore communities are eligible for free or reduced lunches, and chronic absence rates (missing more than 20 days of school) are high, ranging from 19% in elementary school up to 44% in high school. Students to be served are primarily minorities. In Cherry Hill, 96% of public school students are African American, and 2% are Hispanic; in Brooklyn/Curtis Bay, 55.8% of students are African American and 11.9% of students are Hispanic (www.bniajfi.org). Approximately 50% of BEESMART participants are expected to be Hispanic, and a significant Hispanic population is expected to be involved in community events.

Until MCEEC opened, these community residents had little insight or information about the environmental and water quality concerns in their own backyard, which led to the implementation of coordinated school and community outreach programs for these residents. MCEEC programming works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards; this will improve their neighborhoods while encouraging them to become the community's future leaders. Our Community Programs reach out to diverse audiences, from toddlers to adults, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because community residents ultimately hold a responsibility for keeping their neighborhoods clean and reducing their own negative actions that harm the environment. Overall, MCEEC gives South Baltimore residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural, beautiful recreation area if proper environmental actions are taken and maintained.

b) SLURRP recruitment is accomplished through direct contact with school administration and teachers. MCEEC staff will request a meeting at local public schools, introduce SLURRP, and discuss how the program is designed to increase academic skills and PARCC scores, then will develop a schedule with teachers. We have found that schools are often eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation over the last decade. Teachers have the incentive of professional development credits for the school year. BEESMART students will be recruited through SLURRP, as SLURRP educators will use contact time during the school year as an opportunity to promote BEESMART to students in their classrooms and will also disseminate written information about the program and its location/transportation to families in the community and/or will be available to speak to parents who have literacy struggles. Program information will be made available in Spanish as well, because a large percentage of Hispanic families are served by these schools. Students will be selected through a cooperative identification process involving teachers, administrators, BEESMART staff, parents, and students. Youth participating in BEESMART from year to year will have priority to continue in the program over new students, who will be placed on the waiting list.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community via print media and social media, as well as promoting special community events for all ages. Students participating in SLURRP and BEESMART will be encouraged to bring family members to community events. We have also begun to work with the Hispanic Access Foundation (HAF), an organization that works to promote responsible citizenship, educational attainment, and active engagement in improving the health, environment, and financial well-being of Hispanic families throughout the US; locally they are helping MCEEC to partner with Latino groups through local churches. HAF has learned that Hispanics are passionate about their public parks and open spaces. Therefore, environmental conservation ranks high on Latinos' priority list, and HAF will help us attract the growing Latino population in the community to participate in MCEEC programs and events.

(iii) Project Evaluation

(1) MCEEC Programming is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues. Short term outcomes are measured by the number of participants in each program, the number of community programs offered, the weight and types of trash and recyclables collected during community clean-ups, the number and location of storm drains stenciled, and the number of brochures or outreach materials distributed by SLURRP students. The short-term outcomes for sub-grantees are to select the sub-grantee through an application process and work together to put their proposed program in motion.

(2) Medium and long term outcomes are measured by continued participation in SLURRP and MCEEC community programs, the implementation of BEESMART as a summer extension of SLURRP, additional pounds of trash and recyclables collected, and additional storm drains stenciled. A Spring Festival will be held at MCEEC to further promote environmental literacy for students and the community, and will include events such as shoreline plantings and litter collection. Additionally, program participants are surveyed (pre and post-event) about their change in knowledge of urban environmental issues and feelings about stewardship in their community. Water quality will be tested at various points in the program to test the impact of trash collection from school yards and neighborhoods. MCEEC will also record the number of participants in each program. Sub-grantees will be required to submit data indicating the impact of their shoreline plantings/restoration projects, increase in wetland/native plant habitat in the community, and increase in participants' environmental knowledge and attitudes toward stewardship.

The long-term educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student knowledge in the content area and target instruction of SLURRP and BEESMART. The program will measure increases in student academic achievement using activities that align with Maryland College and Career Ready Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about runoff prevention and environmental stewardship. Teachers will complete feedback forms to evaluate academic and social impact on students, the effectiveness of the collaboration, and to provide direction for future efforts. Results will be compiled and compared to determine the impact of the program on participants.

(3) LCF has three decades of experience with successful compliance of federal grants. Our experienced accounting department will work closely with the Program Director to ensure that awarded grant funds and sub-grants are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

C

(b) Detailed Budget

(i)

Line Item	EPA Funds	Non-EPA Funds	Total Project Cost
Personnel			
Lorraine Warnick, MCEEC Director: 25% of $68,750		$17,188	$17,188
Michelle Koehler, Lead SLURRP Educator: 100% of $40,000	$20,000	20000	$40,000
Julian Whitley, SLURRP Educator: 100% of $30,000	$13,500	16,500	$30,000
2 Masonville Educators: 2 x 75% of $35,000		$52,500	$52,500
Weekend Community Educators: 2 x 30% of $30,000		18,000	$18,000
Total Personnel	*$33,500*	*$124,188*	*$157,688*
Fringe @ 12% (FICA, SUTA, Health Insurance)	$4,020	$14,903	$18,923
Supplies			
Program supplies (hand-outs, paints & brushes for stenciling, art supplies for posters, teacher materials) for 2 schools @ $1000 each	426	$1,575	$2,001
Other			
Sub-awards: 3 grants @ $5000 each	$15,000		$15,000
Subtotal	***$52,946***	***$140,666***	***$193,612***
Indirect Costs @ 18.8% 18.23%	$7,054	$26,149	$33,203
Grand Total	**$60,000**	**$166,815**	**$226,815**

(ii) The non-Federal match requirement will be met with funding from Maryland Environmental Services.
(iii) Exactly 25% of the $60,000 request will be awarded as three sub-grants of $5,000 each.
(iv) EPA funding will allow us to meet the costs of serving two more Baltimore City Schools with SLURRP, while six schools will be served with matching funding (for a total of eight schools served).

(c) Appendices

(i) Timeline

October 1, 2016 – September 30, 2017

October 2016

- Acceptance of award
- Correspondence with Baltimore City Public Schools about selection of all participating schools
- Correspondence with potential schools
- Begin selection of subgrantees
- Finalize selection of schools
- Have pre-program meeting with principals and teachers
- Create year-long programming schedule for each school
- MCEEC weekend community education programs

November 2016

- Teacher professional development workshop
- Conduct student pre-program assessment and survey
- Begin preparation phase programming
- Begin tallying teacher feedback forms for each program
- Begin school field programs at MCEEC
- Continue selection of subgrantees
- MCEEC weekend community education programs

December 2016

- Continue preparation phase programming
- School field programs at MCEEC
- Shoreline clean-up event at MCEEC
- Subgrantee selection finalized
- MCEEC weekend community education programs
- Submit Initial Status Report to EPA

January/February 2017

- Complete preparation phase programming, prepare for action phase programming
- Mid-year student assessment and survey
- School field programs at MCEEC
- MCEEC weekend community education programs

March/April 2017

- Action phase programming
- School field programs at MCEEC
- MCEEC Environmental Festival
- Subgrant implementation
- MCEEC weekend community education programs
- Recruitment for BEESMART Summer Program
- Submit 6-month Status Report by end of March 2017

May 2017

- Reflection phase programming
- Conduct student post-program assessment and survey
- Tally all survey and feedback form results
- Conduct end-of-year meeting with teachers
- Shoreline clean-up event at MCEEC

- Subgrant implementation
- MCEEC weekend community education programs

June/July 2017
- BEESMART Summer Program Operates
- Subgrant implementation and finalization

August/September 2017
- Conclude BEESMART Summer Program
- Tally summer programming results
- Submit final grant report after conclusion of grant period

(ii) Logic Model

Outputs	Outcomes		
	Short-term	**Medium-term**	**Long-term**
Management & implementation of education programs in schools and MCEEC	SLURRP outreach programs and MCEEC field experiences for 2 Baltimore City schools (in addition to the six schools served with non-EPA funding—8 total schools served) Collection of trash Storm drains stenciled	Continued outreach to schools Spring Festival at MCEEC BEESMART Summer Program as extension of school year SLURRP Continued reduction of trash in community More storm drains stenciled	Improved environmental literacy and knowledge of storm water runoff issues Change in attitudes regarding pollution Increased attitude of environmental stewardship Significant decrease in trash & runoff pollution in schoolyards and neighborhoods resulting in improved water quality Increase in student achievement through targeted instruction
Planning and implementation of community education programs at MCEEC	Community education programs at MCEEC operate on regular schedule	Increased participation in community events at MCEEC Spring Festival at MCEEC	Increased community awareness of local land use and environmental issues Increased environmental stewardship Increased community visitation to MCEEC as a community resource
Field trips	Fourth and fifth grade field trips to MCEEC	Improved knowledge of local environmental issues and potential action steps towards solutions	Change in attitudes regarding pollution Increased attitude of environmental stewardship Increase in student achievement through targeted instruction
Promote Programs and Events at MCEEC	Creation of brochures	Distribution of brochures; regular updates to SLURRP website	Increased attendance at community events
Sub-grants to partnering entities	Determine sub-grantees Creating partnerships to further the environmental education goals	Shoreline planting projects Native plantings and restoration projects Latino Community Environmental Outreach	Improved environmental literacy and knowledge of urban environmental issues Change in attitudes regarding pollution Increased environmental

		High school partnership projects	stewardship, especially in the local Latino community Increased wetland and native plant habitat resulting in improved water quality

(iii) Programmatic Capability and Past Performance

Organizational Experience and Capacity

Living Classrooms Foundation (LCF) has a long history of completing projects and achieving the stated goals of each. We have an excellent reputation for yielding quality results and adhering to the requirements of grants and agreements from diverse funding streams, both government and private sector (please see below for details).

Living Classrooms Foundation was established in Baltimore, Maryland in 1985. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 44,000 students a year enrolled in diverse programs that take place on Living Classrooms' campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships. For over 30 years, Living Classrooms has been a leader in education, workforce development, and positive social change in the Baltimore-Washington region, earning local and national recognition for our results. Living Classrooms Foundation addresses head-on some of the most challenging issues affecting disadvantaged children and young adults, and believes that every student, even those residing in distressed communities, can reach his or her potential if provided a continuum of resources and quality programming that is effective and structured.

Living Classrooms offers a distinctive competency in experiential learning—literally learning by direct experience, or what the Foundation calls "learning by doing." We apply our skill in three program areas: 1) Educating students through our own charter school, through after-school and supplemental education programs, and through environmental experiences, with special emphasis on serving students who are disadvantaged or live in high-risk environments; 2) Eliminating barriers to success for young adults and families, especially those living in poverty, through community development, workforce preparation, and life skills training; and 3) Educating the general public, and students in particular, about the significance of the region's maritime heritage and its role in shaping who we are as a community and nation.

In 2009, LCF joined with the Maryland Port Administration (MPA) to become the lead educational and operational partner of the Masonville Cove Environmental Education Center (MCEEC), a unique, urban nature facility located along the Patapsco River's Middle Branch. The Center currently includes a "green" building with science labs, over 50 acres of land, 70 acres of water, picnic areas, a bird sanctuary, hiking trails, a pier, and several tidal and non-tidal wetland projects. Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC hosts the annual Masonville Cove Environmental Festival, and has become a hub where SLURRP schools can learn more about the nature of their urban environment while participating in various restoration projects. To date, MCEEC has served 14,568 students and 670 teachers with educational outreach and community environmental programming, and in 2013, the site was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

LCF has been very successful in operating educational programs and schools as well. Our experience with providing successful out-of-school time programming for youth is extensive. Our CARE (Comprehensive Academic, Recreation, and Enrichment) After School/Summer Program serves low-income youth in East Baltimore, and has consistently exhibited positive results since it began in 2006. In the 2014-2015 school year, 88% of students in CARE improved by one letter grade in Math, and 93% improved by one letter grade in Literacy/Language Arts. 82% missed fewer than 10 days of school. In addition, our BUGS (Baltimore Urban Gardening with Students) After School Program has served at-risk youth with academic enrichment based on environmental horticulture for the past 16 years. It has become a national model program and was awarded the 2009 William S. White Program of Distinction Award by the US Department of Education. In 2014-15, The Crossroads School (a Baltimore City

charter middle school operated by Living Classrooms) was a top performing City middle school: 88% of students ended the year with a GPA of 70% or higher, 58% with a GPA of 80% or higher, and 16% with a GPA of 90% or higher (percentages of 4.0 GPA). Living Classrooms led a successful restructuring of Commodore John Rodgers, a Baltimore City elementary/middle school that was selected as a "turn-around" school in 2010 due to poor academic performance; Living Classrooms staff has not only led this to becoming the top performing turn-around school in the City, but the school has tripled its enrollment and also become competitive with the City's higher performing schools in standardized tests and student grades.

Living Classrooms Foundation currently operates on an annual $15 million budget. The Foundation has a long track record of compliance and fiscal responsibility with federal, state, local, corporate and foundation grants ranging up to and over $1,000,000. Major sources of funding have come from the Harry and Jeanette Weinberg Foundation, Under Armour, the W.K. Kellogg Foundation, the Steve and Renee Bisciotti Foundation, the Cal Ripken Sr. Foundation, the Open Society Institute, Joe and Debra Weinberg, and Constellation Energy. Living Classrooms Foundation also receives funding from the US Departments of Labor, Education, Health and Human Services, Justice, and Interior; the State of Maryland; and City of Baltimore.

Staff Qualifications & Key Personnel

Living Classrooms Foundation is operated by a permanent staff of 243; this number grows to over 300 during summer programs. Leadership is provided by James Piper Bond, President and CEO, Nicole Ruocco-CFO, Thara Taylor-Vice President of Development and Communications, Bill Cunningham-Vice President for Government Relations, Steve Bountress-Vice President for Workforce Development, Scott Raymond-Vice President for Education, and Christopher Rowsom-Vice President for Maritime Heritage Programs. These staff members have been with Living Classrooms for periods ranging from eight to twenty-eight years with one exception--CFO Nicole Ruocco joined the staff in 2013.

Key staff members that are directly involved in managing and implementing the environmental education programming at MCEEC are Christine Truett, LCF's Director of Education; Lorraine Warnick, Director of the MCEEC, and Christine Redline, Assistant Director of the MCEEC and Director of BEESMART. Ms. Truett has worked with Living Classrooms Foundation for 23 years, starting as a shipboard environmental educator, and moving up to Assistant Director of Education and later Director of Education, a position she has held since 2000. Ms. Truett holds a BS in biology from Mary Washington College. She has extensive experience in directing environmental education programs, including oversight of environmental education programming at MCEEC, and has an excellent track record of successfully operating programs using federal, state, and private funding. She will be in charge of program oversight, including grants management and reporting.

Ms. Warnick began working at Living Classrooms Foundation as a shipboard educator in 1997. She has since been a Program Director, Director of Environmental Education, and in 2009 became the Director of the MCEEC. Ms. Warnick holds a BS in Biological Sciences from the University of Maryland, and a MS in Environmental Science and Policy from Johns Hopkins University. She is responsible for the oversight of the programs discussed within this application, and has extensive experience implementing grants, managing budgets, grant reporting, and program evaluation. Ms. Warnick will ensure that all program curricula meets the educational and environmental outcomes of the proposed programming.

The Assistant Director of the MCEEC is Ms. Christine Redline. Ms. Redline holds a Bachelor's Degree in Environmental Studies from Washington College in Chestertown, MD, and a Master of Science Degree in Environmental Education from Lesley University in Cambridge, MA. She began working with Living Classrooms Foundation as an Outreach Educator for the SLURRP program in 2006, became the Education Supervisor at MCEEC in 2008, and since 2014 has served as the Assistant Director of MCEEC. She is also the Director of the BEESMART Program. Ms. Redline is experienced in providing environmental education programming that aligns

with Maryland's College and Career Ready educational standards, and Environmental Literacy standards, coordinates programs and field trips, and trains volunteers and interns in the best practices of environmental education. Ms. Redline was previously an environmental educator at Denison Pequotsepos Nature Center in Mystic, CT and Echo Hill Outdoor School in Worton, MD. She has experience with providing environmental education to inner city youth in underserved communities. All of the staff members that she oversees are well trained to effectively provide SLURRP, BEESMART and other community programs in such a way that they have maximum impact on the participants. Ms. Redline will ensure that programs are being operated to meet the proposed educational and environmental outputs and outcomes.

SLURRP is led by Ms. Michelle Koehler, Lead Educator at MCEEC. Ms. Kohler holds a BA Degree from Towson University, and has been an educator at Living Classrooms Foundation since 1997, directing a variety of after school and summer programs. She has extensive experience in successfully leading hands-on environmental education programs for students, as well as with grants management and reporting. Ms. Koehler is also the Assistant Director of the BEESMART program. She will ensure that all program curriculum is being presented properly to students and appropriately assessed by MCEEC educators and classroom teachers.

Previous Federally Funded Assistance Agreements

Over the past 30 years, Living Classrooms Foundation has received countless federally funded assistance agreements from such diverse agencies as the United States Departments of Education, Justice, Labor, Health and Human Services, and Interior; and NOAA. Living Classrooms has also received previous EPA grants, in 1997, 2004, and 2014. The projects that resulted from all of these funding agreements were successful, completed within the proposed time frame, and reported on within the required parameters of each individual agreement. Grant details for the past three years are as follows:

EPA-EE Grant (2014-15) Assistance # NE-963298-01-0: In 2014, Living Classrooms Foundation was awarded a $75,000 grant through the EPA EE Grant Program (Opportunity Number EPA-EE-13-01, CFDA Number 66.951) for Masonville Cove Environmental Education Programming. This is the same programming that we are expanding upon for the current request. LCF has completed and managed this grant agreement successfully; all interim reports were submitted complete and on time, with the final report being submitted on March 31, 2016. Funding was used as proposed to implement the SLURRP environmental education initiative in three South Baltimore schools and conduct community engagement events that served 1,494 residents of all ages. Four sub-grants were successfully awarded to The National Aquarium in Baltimore's Conservation Team to construct a floating footbridge over wetlands at Fort McHenry National Monument and Historic Shrine; Ben Franklin High School at Masonville Cove to support citizen science, environmental activities, and agricultural programming at the school; Lakeland Elementary/Middle School to help support their Outdoor Ecology Classroom, which includes a greenhouse with planting tables, stream tables, and keyhole gardens, which use food waste from the cafeteria to create compost for growing plants; and Pathway Church of God, a neighborhood church that planted an aesthetically pleasing, low-maintenance milkweed garden, the planning and construction of which educated community members about native plants and run off mitigation, and helped to instill a sense of environmental stewardship in the local community. These projects were completed as proposed; however a three-month funding extension was requested and granted due to the sub-grantees needing additional time to fully and properly execute their programs.

NOAA B-WET (2012-2015): Within the past three years, a relevant project that is similar in size and scope that has been completed with a federal funding agreement is a grant from NOAA's B-WET environmental education program for the SLURRP initiative referenced in this application. Living Classrooms Foundation has received a continuous series of these NOAA grants since the inception of B-WET in 2002. The most recent of these was a 3-year grant awarded in 2012 ($120,000 per year, $360,000 total). Year 1 took place from July 2012 - June 2013, Year 2 took place from July 2013-June 2014, and Year 3 took place from July 2014-June 2015. LCF competently executed the activities funded by all three years of the B-WET grant agreements, and met the stated objectives of the

agreements. We punctually reported to NOAA on the achievement of program outcomes and outputs, and reports were submitted in a timely fashion according to the schedule presented in the grant agreements.

(a) Work Plan:

(i) Project Summary

(1) Organization and Partnerships: Living Classrooms Foundation (LCF) is a Baltimore-based 501(c)(3) educational organization that strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 30 years, LCF has provided experiential environmental education to a wide variety of audiences, with a special emphasis on serving at-risk youth. Our environmental education programs are headquartered at the Masonville Cove Environmental Education Campus (MCEEC) in South Baltimore, and are managed by MCEEC Director Lorraine Warnick. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. Key partners are the Baltimore City schools participating in MCEEC programming, as they assist with curricular alignment, program implementation, and professional development.

Lorraine Warnick

(2) History of Receiving EE Grants: In 2014, LCF received an EPA-EE Grant for the MCEEC Environmental Education programming proposed within this application. However, with the funding requested for 2016-17, we are expanding upon the previously funded programs with the addition of BEESMART (Baltimore Environmental Education Math and Reading Trailblazers), which enhances and extends one of MCEEC's major environmental education initiatives, SLURRP (School Leadership in Urban Runoff Reduction Project) into the summer for students who participated in SLURRP during the previous school year. In addition, we will use EPA-EE funds to expand SLURRP into two more Baltimore City schools during the 2016-17 school year to reach greater numbers of youth and teachers (for a total of eight schools served).

(3) Goals and Objectives: Program goals are: 1) involvement of two additional schools in the SLURRP environmental education initiative during 2016-17; 2) extension of SLURRP participants' learning into summer 2017 through BEESMART; and 3) Community Engagement events including weekend environmental education programming for families, evening presentations for adults, regular on-site guided walks, and a spring environmental festival. Program objectives are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the community, provide an awareness of land use and local environmental issues, and to create behavioral change in regards to both education and environmental literacy. Academically, students will exhibit increases in achievement as they complete program activities. These goals and objectives meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities focused on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused learning standards. Community programs educate residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, littering, recycling, and water conservation, among others.

(4) Priorities: MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in family education programs and stewardship activities. The project also addresses EPA Environmental Priority 4 (Protecting Water), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has previously been identified by the Maryland Department of the Environment as having high levels of contaminants.

(5) Local Relevance: Programming takes place at MCEEC, 1000 Frankfurst Avenue, Baltimore, MD 21226, and in South Baltimore public schools, all located within the Patapsco River watershed, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. MCEEC is an approved Baltimore Urban Waters Initiative project.

(6) Implementation: MCEEC programs are implemented through year-long outreach lessons that provide a sustained experience in schools, hands-on field trips for school youth, a 5-week summer program, on-site weekend programs, and community events. Sub-grants will be awarded to entities that will enhance our environmental literacy programs in local schools and/or implement community environmental events for families or adults.

(7) Audience: Programming will serve South Baltimore residents, including ~650 3rd-5th grade students and 16 teachers from Title I public schools, and ~1,500 community members from toddler to adult. Many participants are low-income and/or minorities (particularly Latino), as described in section 4a below.

(8) Costs: The main types of expenses that will be requested from EPA include salaries, fringe benefits, program supplies, indirect costs, and the required sub-awards to other organizations (four sub-grants of $5,000 each).

20,000 Sub grants

(ii) Detailed Project Description

(1) What: **a)** The proposed project will include implementation of several key programs that make up the MCEEC's overall environmental education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for two Baltimore City schools (in addition to the six currently being served with other funding sources); 2) BEESMART, a five-week summer program that extends and expands the SLURRP concept into the summer months to help participating students retain academic skills while participating in environmental education; and 3) Community Engagement events and programs that engage residents of all ages in environmental literacy activities. SLURRP and BEESMART fulfill EPA Educational Priority 2 (Educational Advancement) by providing formal hands-on environmental literacy programs to students that advance their knowledge of environmental science and issues and align with Maryland's College and Career-Ready educational standards, Maryland Environmental Literacy Standards, and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. Community Engagement events fulfill Educational Priority 3 (Community Projects) by using interactive stewardship activities, including community clean-ups and shoreline plantings, as a hook to attract diverse audiences to the center for environmental education. Program implementation is as follows:

- **SLURRP**: This well-established curriculum and proven Meaningful Watershed Educational Experience (MWEE) has been providing hands-on environmental education to Baltimore City youth in grades 4 and 5 since 2002. Currently we are serving six schools, but this grant would allow us to expand our reach to two additional underserved city schools. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. Through five outreach programs and one trip to MCEEC, students use critical thinking, observation, and data collection to answer the question, "What is storm water runoff pollution, and how can we help prevent it?" The program targets critical connections between environmental science, reading, writing, and math. During the year-long program, MCEEC educators visit each participating school three times and guide 4th and 5th grade students through preparation, action, and reflection phases; teachers are trained to lead an additional two outreach programs in their classroom/schoolyard, for a total of five school-based outreach programs during the year. Programming occurs primarily on school grounds and in the immediate community. All students also participate in one field experience at the MCEEC, where they engage in hands-on learning and restoration activities. Teachers participate in one professional development workshop, as well as ongoing conversations with SLURRP educators regarding student action steps and environmental awareness.

5 outreach and 1 trip to MCEEC

4th Grade SLURRP Activities: In the first preparation program for 4th grade students, "What is a Watershed?," MCEEC instructors visit schools and engage students in an interactive, multimedia presentation that introduces the general concepts of a watershed and runoff pollution. Students investigate how land use affects runoff by working with a hands-on enviroscape model and grade-appropriate worksheets that emphasize reading and writing. Students also receive watershed maps and work with the interactive watershed model so that they can understand that they are part of a larger ecological system and that runoff pollution is a regional concern. They will then identify sources of pollution in their community. At the end of the first outreach, teams of students will be assigned with surveying parents and neighbors about runoff and attitudes towards littering.

Building on their newfound knowledge of runoff pollution, the second MCEEC-led outreach addresses Storm Drains and Sewers. Students learn the difference between the two: how sewers direct water to wastewater treatment plants to be cleaned, but storm drains send water straight back into the watershed with everything that it has collected along the way. Students discuss where water goes when it falls on an impervious surface compared to a pervious surface. Using microscopes, they compare and contrast water samples of rainwater taken from their school's parking lot with water samples that have traveled through the culvert at Masonville Cove. These activities should lead them to conclude that pollution on their schoolyard affects water quality for the whole region.

The third MCEEC-led outreach activity, "Future Environmental Engineers" is designed to help students understand and demonstrate the role of engineering in environmental protection. Students watch a video of outfall at Masonville Cove during a rainstorm, then work together to answer these questions: Using what we have learned about runoff, impervious and pervious surfaces, plants, and storm drains and sewers, how can this be prevented in the future? How can we slow this water down and make sure trash is not entering our water? Students are provided with household materials and asked to design and build a trash interceptor model that will be tested in real-world trials along with models made by students at other schools to see which one prevents more trash from entering the watershed. When students visit MCEEC, they will be able to watch construction of a full-scale "real life" trash interceptor being installed by the Maryland Port Administration at the Masonville Cove outfall just downhill from the Education Center on the campus. This will provide an excellent example to demonstrate the real world

implications of what they are learning in SLURRP.

Through these first three outreach programs, students come to understand that trash on the city streets will ultimately end up in the Chesapeake Bay or one of its tributaries. To help prevent this, the first teacher-led 4th-grade outreach is an action step in the form of a neighborhood trash clean-up. MCEEC staff will provide teachers with gloves, trash bags, and scales for measuring amounts of trash collected, and instructions for leading students through the activity, including proper disposal of trash and recyclables collected. Students will record data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.

The second teacher-led outreach will be "Missing Creatures in Maryland." Students will learn how storm water runoff and land degradation has threatened some of Maryland's most unique and valuable wildlife, like the hellbender salamander. They will propose ways to save these important species by creating a "MISSING" poster to be displayed in their schools, and will present what they have learned to other students, to help spread the knowledge that human activities are negatively affecting animal life in the Chesapeake Bay watershed.

As an additional outreach, 4th grade students will take a field trip to participate in environmental education activities at MCEEC. This allows students to reflect on all that they have learned during the SLURRP experience by seeing the watershed in action. Field trip activities are richly structured, STEM-based learning experiences that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. By conducting projects and experiments at the edge of the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. This reflection activity synthesizes all the information that students have learned and explored together: an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.

5th grade SLURRP Activities: During the first 5th grade SLURRP outreach, students will recap what they have previously learned in SLURRP regarding the Chesapeake Bay and the role students play in their communities in relationship to the Bay (these will be students that participated in SLURRP during the previous year with other funding sources). Using their previous knowledge, the first MCEEC-led activity of the year is to create a "Schoolyard Report Card." SLURRP staff, students, and teachers will walk the entire area of their schoolyard and survey and identify amounts of impervious surface or other problem areas that contribute to storm water runoff. They will grade the schoolyard on elements such as amounts of green space vs. asphalt, and areas where trash is prone to collect. They will discuss improvements they can make so that their schoolyard can more positively impact the condition of the Chesapeake Bay.

The Schoolyard Report Card preparation phase will lead into the next outreach, "Storm Drain Mapping." Building on what they have learned, students will understand that runoff pollution within any part of a watershed can affect areas downstream of the source of that pollution. Students will be able to comprehend the concepts of sub-watersheds by using GPS units to map elevations on their schoolyard, including all of the storm drains on the school property and surrounding area. They will identify land use near the storm drains, and assess the potential pollutants that may contribute to storm water runoff.

The first teacher-led outreach will have students creating a brochure educating the community about storm water runoff. The Center for Watershed Protection's "Teacher's Guide for Creating a Water Monitoring Program" is used as a reference for this project. With the help of carefully constructed worksheets, students will create informational brochures to be distributed to the residents of the community where storm drain stenciling will occur. The brochures contain information on where the storm drains empty, and the importance of keeping the drains clear of trash and other pollutants. The brochure will notify the community that the students will be out stenciling storm drains, explain why it is being done, and provide tips for residents to reduce storm water runoff on their own.

Following creation of the brochure will be a "Storm Drain Stenciling/Community Clean-Up" action project. Throughout this activity, students are challenged to analyze the flow of storm water on their campus and make note of any problem areas, such as regions of the street or schoolyard that flood during rain events. Students then review storm drain maps from the Baltimore Department of Public Works and try to locate the outfall locations for the storm drains in their neighborhood so that they can see where their storm water ultimately goes. With this knowledge, students are able to understand why they should complete the action step of stenciling storm drains. Under the supervision of MCEEC staff, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump"; after stenciling is complete, they will conduct a community clean-up.

The second teacher-led outreach will be another action step: "Redesign Your Schoolyard." Using the information gleaned during the preparation phase at the start of the school year, students and teachers will work together to create a multi-year planting design of a functional and aesthetically pleasing green area unique to each

school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property. Through professional development, teachers will be encouraged to seek funding for implementation of these designs. These designs may be implemented and expanded in future years with additional plantings and wildlife habitat enhancements, such as birdhouses and butterfly gardens. SLURRP-trained teachers will help students and school representatives to develop and incorporate environmentally friendly maintenance strategies, such as limited use of pesticides and fertilizers. Students will synthesize all that they have learned about storm water runoff and how to prevent it with their designs and will create posters and blueprints that they will present to their classmates.

The 5th grade reflection phase will include participation in the annual Masonville Cove Environmental Festival, during which students will reflect on their SLURRP experiences while planting native species, picking up litter, composting their lunch waste, and learning about native wildlife. They also have the opportunity to speak with representatives from a variety of local environmental organizations who host stations addressing urban runoff pollution and what people can do to help prevent it, which provides a direct link to their work throughout SLURRP.

As part of SLURRP, integrated professional development for classroom teachers will be delivered, with the result that teachers will be able to actively lead two outreach programs. The professional development will familiarize teachers with the SLURRP environmental content, help them reinforce academic instruction in areas of student need, and strengthen the continuity between SLURRP subjects and required content standards. LCF's SLURRP staff will provide training and materials that will prepare teachers to lead two of the five outreach programs on their own in their classrooms/schoolyards, including action and reflection phases. This is a change from our past years of SLURRP implementation, in which LCF staff provided an entire package of programming for the entire year and conducted all outreach programs. However, with Maryland's new Environmental Literacy graduation requirement, we are placing a focus on helping prepare teachers with the expertise necessary for them to incorporate and reinforce the appropriate environmental science standards necessary to meet classroom STEM and literacy outcomes and align programming with Next Generation Science Standards. We hope that by giving ownership of a portion of the program to the teachers, that they will be encouraged to be environmental role models for their students. Throughout the year, teachers will also engage in discussions regarding SLURRP participation, which will allow SLURRP staff and teachers to self-assess their instruction around their students' performance.

- **BEESMART**: This 5-week full-day summer program for rising 3rd-5th graders uses E-STEM projects related to real-world local environmental problems as a vehicle for students to retain reading and math levels throughout the summer. The program will serve 60 students who either participated in SLURRP during the previous school year, or who will participate in SLURRP in upcoming years, and therefore further enhances and expands environmental science education for youth through the summer. This creates a continuity of learning from school year to summer that is expected to have a significant impact on the achievement levels of participants, in environmental literacy as well as reading. This continuity will also be advantageous as students continue on in school and will be better prepared to meet Maryland's Environmental Literacy graduation requirement.

  BEESMART operates at MCEEC and on the campus of two Baltimore City public schools. Each morning, students receive one and a half to two hours of academic instruction including small-group coaching sessions with a Reading Specialist and Educator-led STEM lessons (on some days these will occur onboard LCF's historic buyboat Mildred Belle). After lunch, students will be engaged in a literacy-focused lesson infused with one of the five weekly STEM themes: Healthy Environment, Healthy Water, Healthy Habitat, Healthy Food, and Masonville Memories. Afternoons will be filled with a variety of hands-on STEM-focused academic and enrichment activities.

  During BEESMART, students have the unique opportunity to build NOAA-designed underwater Remotely Operated Vehicles equipped with cameras, called Aquabotz, which support student investigations into underwater areas that are not otherwise accessible. Students also learn computer and resource analysis skills as they research topics to solve a problem, and are introduced to tablet use as they investigate the impact of litter on land and water, study water quality, and explore topics such as decomposition. They use their skills and imaginations to solve local environmental problems caused by improper trash disposal and illegal dumping. The following activities will occur multiple times within the program: Service Learning projects (i.e neighborhood and watershed clean-ups, storm drain stenciling), Computer Lab E-STEM research, and activities chosen by students.

- **Community Engagement Programs**: LCF will plan, develop, and implement free community environmental literacy events for South Baltimore residents. Community Education Coordinators will plan, advertise, conduct, and track an average of five community education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with local churches and community groups to create new opportunities for community participation on the Masonville Cove Campus. For example, in the coming year, we

will be working with the Hispanic Access Foundation and a local church group to develop volunteer opportunities and outreach programs for the growing Latino population in the community.

Weekend programs for younger children and their families may include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban neighborhoods and encourage them to take part in the free community activities that are offered. In addition, free Guided Walks with a Maryland Master Naturalist are offered regularly, weather permitting.

Finally, MCEEC will host bi-annual community shoreline clean-up events in the spring and fall. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, styrofoam, wood, etc.); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change over the years.

b) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water), as one of the goals of all MCEEC programming is to reduce storm water runoff pollution and improve water quality in the Patapsco River watershed. Activities at MCEEC align with other local initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning the harbor to be swimmable and fishable by 2020. As described in greater detail above, our programs address this with water quality testing, community clean-ups, public outreach about litter and pollution, and "greening" local schoolyards.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. MCEEC and its programs, in partnership with the Maryland Port Administration (MPA), are the cornerstone of a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. To date, over 60,000 tons of debris has been removed from the site, including old appliances, tires, construction waste, and rubble. MCEEC, a designated Urban Wilderness site with 54 acres of land and 70 acres of water, is now providing the first public waterfront access for residents of these South Baltimore communities in generations. In 2013, the MCEEC was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

(2) Why: a) The goals of environmental education programming at MCEEC include the following: To provide hands-on environmental education programs for approximately 650 Baltimore City students in 2016-17 that meet learning standards and help prepare them for Partnership for Assessment of Readiness for College and Careers (PARCC) testing (through SLURRP) and help reduce summer learning loss (through BEESMART), to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

MCEEC has chosen to focus on these goals for several reasons. Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating and implementing environmental literacy programs in Baltimore City. Urban schools often must travel out of their communities to find these experiences, and students sometimes have difficulty connecting these experiences with their daily life in the city. Also, Baltimore City schools are often financially challenged and burdened with large class sizes, making outdoor experiences difficult or unattainable. Teachers often struggle to implement required curriculum and do not have time or resources to involve students in "extra" projects.

MCEEC programming was developed to address these challenges. For instance, SLURRP directly supports the recommendations of the Chesapeake Bay Agreement and Maryland's Partnership for Children in Nature by bringing relevant environmental education into Baltimore City classrooms, promoting stewardship, and getting city students to interact with and appreciate their local outdoor environment. All MCEEC environmental literacy

programs encourage behavioral change that benefits the environment through hands-on activities that bring students and the community in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings.
b) We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water, because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants are directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. Over the past 30 years, LCF has provided hands-on environmental literacy programs that have successfully encouraged underserved youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each MCEEC program address ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue, think about how their personal actions can affect this problem, and seek and implement solutions.

We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments. Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. MCEEC programs address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.
c) The need for our project is evident in the outcomes delineated in the Education and Outreach section of the revised Chesapeake Bay Watershed Agreement, which include an increase in student understanding of the watershed through teacher-supported Meaningful Watershed Educational Experiences and rigorous inquiry-based instruction, as well as an increase in the number of schools in the region that reduce the impact of their school building and grounds through student-led protection and restoration projects. Also, the Maryland Partnership for Children in Nature states that all Maryland young people should have opportunities to connect with the natural world and grow to become informed and responsible stewards. Key recommendations of the partnership include strengthening students' connection to nature during the school day, and reaching out to underserved communities.

In addition, the US Fish and Wildlife Service Chesapeake Bay Field Office (CBFO) has drafted a wildlife management plan for Masonville Cove that utilizes a landscape management strategy and identifies long-term management goals and strategies for the entire Patapsco River watershed. The landscape conservation approach to Masonville Cove and the Patapsco watershed is one that is reflected in the CBFO strategic plan and is intended to be implemented with a variety of state and federal partners. Finally, in 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project that epitomizes the goals of the Initiative.
(3) How: a) MCEEC management and educational staff and six schools are in place, and program implementation designs are established in order to immediately begin working toward program outcomes once funding is in place (including selecting two additional schools if funded). All MCEEC programs are designed to achieve outcomes using the 5 E's of STEM instruction: Engage (students are introduced to a topic that has real-world relevance to them), Explore (students investigate the problem through research and experimentation), Explain (students relate what they have learned through writing and speech), Extend (students think about how this problem impacts not only their community, but the wider environment and Chesapeake watershed as a whole), and Evaluate (students brainstorm solutions to the problem, articulate their ideas, and consider solutions presented by others).

SLURRP and BEESMART enhance environmental literacy through hands-on experiments that test various forces of nature and reinforce how math and science are integral to the environmental impact of things that people

do on a daily basis. Community programs provide fun and age-appropriate environmental literacy topics and hands-on projects to excite participants' imaginations and introduce them to environmental education. Community talks, environmental festivals, and neighborhood clean-ups are offered for adult residents to help them understand the negative implications of littering and dumping on the environment, both locally and globally, and to show how they can be part of the solution by properly disposing of trash, recycling, and advocating for the community.
b) SLURRP and BEESMART let students use hands-on projects to solve real-world environmental issues that are affecting their community; most notably, reduction of storm water runoff pollution and improving water quality. Students and community members will record and weigh the types of trash and recyclables collected during clean up events, and the numbers and types of shoreline plants that are planted during events. We will also keep track of the number and locations of storm drains stenciled. Water quality testing will be performed and results monitored for changes. By learning about and visibly helping to improve their neighborhoods, students will be encouraged to become leaders and may develop a change in attitude that will grow into a life-long community stewardship.

Should be $60,000

c) Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing four (4) sub-grantees who will be granted $5,000 each ($20,000 total, or exactly 25% of the $80,000 requested) for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and that also work to improve the Patapsco watershed. We are considering a grant to the National Aquarium Conservation Team for community shoreline plantings in the vicinity of MCEEC to help stabilize the shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for the Hispanic Access Foundation and a local church group, Pathway Church of God, both of whom partnered with us in 2015 to engage the local Latino population in urban environmental education projects including storm drain stenciling, trash collection, and planting milkweed to attract monarchs. Finally, we will approach the local public high school, Ben Franklin High School at Masonville Cove about a sub-grant award that will allow students and teachers to fund an age-appropriate community environmental project. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals of increasing environmental literacy. Prospective grantees will be asked to complete essays describing project goals and objectives and how they align with the EPA's goals and objectives. MCEEC staff will provide oversight on projects conducted by sub-grantees to ensure that they achieve expected outputs and outcomes.
(4) Who: a) Our target audience is South Baltimore residents from Brooklyn/Curtis Bay and Cherry Hill, including underserved 3rd-5th grade students and teachers from eight Title I public schools (~650 students and 16 teachers), and approximately 1,500 community members including toddlers and parents in Saturday programs, and adults of all ages who attend community events. The total number of participants over the year will be approximately 2,200. The communities served reflect income, education, and employment statistics more dire than Baltimore City as a whole. In 2013, median annual household incomes in these areas ranged between $23,918 and $34,420 (compared to the citywide median of $41,385), family poverty rates between 28.7-40.2% (compared to 19.1% citywide), and unemployment rates between 21.2 and 21.9% (compared to 14.2% citywide) (www.bniajfi.org). A third of the adult population (over 25) does not have a high school diploma or GED; less than 10% have attended college. Over 90% of students in these south Baltimore communities are eligible for free or reduced lunches, and chronic absence rates (missing more than 20 days of school) are high, ranging from 19% in elementary school up to 44% in high school. Students to be served are primarily minorities. In Cherry Hill, 96% of public school students are African American, and 2% are Hispanic; in Brooklyn/Curtis Bay, 55.8% of students are African American and 11.9% of students are Hispanic (www.bniajfi.org). Approximately 50% of BEESMART participants are expected to be Hispanic, and a significant Hispanic population is expected to be involved in community events.

Until MCEEC opened, these community residents had little insight or information about the environmental and water quality concerns in their own backyard, which led to the implementation of coordinated school and community outreach programs for these residents. MCEEC programming works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards; this will improve their neighborhoods while encouraging them to become the community's future leaders. Our Community Programs reach out to diverse audiences, from toddlers to adults, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because community residents ultimately hold a responsibility for keeping their neighborhoods clean and reducing their own negative actions that harm the environment. Overall, MCEEC gives South Baltimore residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural, beautiful recreation area if proper environmental actions are taken and maintained.

b) SLURRP recruitment is accomplished through direct contact with school administration and teachers. MCEEC staff will request a meeting at local public schools, introduce SLURRP, and discuss how the program is designed to increase academic skills and PARCC scores, then will develop a schedule with teachers. We have found that schools are often eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation over the last decade. Teachers have the incentive of professional development credits for the school year. BEESMART students will be recruited through SLURRP, as SLURRP educators will use contact time during the school year as an opportunity to promote BEESMART to students in their classrooms and will also disseminate written information about the program and its location/transportation to families in the community and/or will be available to speak to parents who have literacy struggles. Program information will be made available in Spanish as well, because a large percentage of Hispanic families are served by these schools. Students will be selected through a cooperative identification process involving teachers, administrators, BEESMART staff, parents, and students. Youth participating in BEESMART from year to year will have priority to continue in the program over new students, who will be placed on the waiting list.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community via print media and social media, as well as promoting special community events for all ages. Students participating in SLURRP and BEESMART will be encouraged to bring family members to community events. We have also begun to work with the Hispanic Access Foundation (HAF), an organization that works to promote responsible citizenship, educational attainment, and active engagement in improving the health, environment, and financial well-being of Hispanic families throughout the US; locally they are helping MCEEC to partner with Latino groups through local churches. HAF has learned that Hispanics are passionate about their public parks and open spaces. Therefore, environmental conservation ranks high on Latinos' priority list, and HAF will help us attract the growing Latino population in the community to participate in MCEEC programs and events.

(iii) Project Evaluation

(1) MCEEC Programming is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues. Short term outcomes are measured by the number of participants in each program, the number of community programs offered, the weight and types of trash and recyclables collected during community clean-ups, the number and location of storm drains stenciled, and the number of brochures or outreach materials distributed by SLURRP students. The short-term outcomes for sub-grantees are to select the sub-grantee through an application process and work together to put their proposed program in motion.

(2) Medium and long term outcomes are measured by continued participation in SLURRP and MCEEC community programs, the implementation of BEESMART as a summer extension of SLURRP, additional pounds of trash and recyclables collected, and additional storm drains stenciled. A Spring Festival will be held at MCEEC to further promote environmental literacy for students and the community, and will include events such as shoreline plantings and litter collection. Additionally, program participants are surveyed (pre and post-event) about their change in knowledge of urban environmental issues and feelings about stewardship in their community. Water quality will be tested at various points in the program to test the impact of trash collection from school yards and neighborhoods. MCEEC will also record the number of participants in each program. Sub-grantees will be required to submit data indicating the impact of their shoreline plantings/restoration projects, increase in wetland/native plant habitat in the community, and increase in participants' environmental knowledge and attitudes toward stewardship.

The long-term educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student knowledge in the content area and target instruction of SLURRP and BEESMART. The program will measure increases in student academic achievement using activities that align with Maryland College and Career Ready Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about runoff prevention and environmental stewardship. Teachers will complete feedback forms to evaluate academic and social impact on students, the effectiveness of the collaboration, and to provide direction for future efforts. Results will be compiled and compared to determine the impact of the program on participants.

(3) LCF has three decades of experience with successful compliance of federal grants. Our experienced accounting department will work closely with the Program Director to ensure that awarded grant funds and sub-grants are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

(a) Work Plan:

(i) Project Summary

(1) Organization and Partnerships: Living Classrooms Foundation (LCF) is a Baltimore-based 501(c)(3) educational organization that strengthens communities and inspires young people to achieve their potential through hands-on education and job training, using urban, natural, and maritime resources as "living classrooms." For over 30 years, LCF has provided experiential environmental education to a wide variety of audiences, with a special emphasis on serving at-risk youth. Our environmental education programs are headquartered at the Masonville Cove Environmental Education Campus (MCEEC) in South Baltimore, and are managed by MCEEC Director Lorraine Warnick. Programs are implemented by MCEEC Education staff, who are all qualified in environmental sciences and education. Key partners are the Baltimore City schools participating in MCEEC programming, as they assist with curricular alignment, program implementation, and professional development.

(2) History of Receiving EE Grants: In 2014, LCF received an EPA-EE Grant for the MCEEC Environmental Education programming proposed within this application. However, with the funding requested for 2016-17, we are expanding upon the previously funded programs with the addition of BEESMART (Baltimore Environmental Education Math and Reading Trailblazers), which enhances and extends one of MCEEC's major environmental education initiatives, SLURRP (School Leadership in Urban Runoff Reduction Project) into the summer for students who participated in SLURRP during the previous school year. In addition, we will use EPA-EE funds to expand SLURRP into two more Baltimore City schools during the 2016-17 school year to reach greater numbers of youth and teachers (for a total of eight schools served).

(3) Goals and Objectives: Program goals are: 1) involvement of two additional schools in the SLURRP environmental education initiative during 2016-17; 2) extension of SLURRP participants' learning into summer 2017 through BEESMART; and 3) Community Engagement events including weekend environmental education programming for families, evening presentations for adults, regular on-site guided walks, and a spring environmental festival. Program objectives are to increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the community, provide an awareness of land use and local environmental issues, and to create behavioral change in regards to both education and environmental literacy. Academically, students will exhibit increases in achievement as they complete program activities. These goals and objectives meet the EPA's definition of "environmental education" because they connect youth to their environment through engaging academic curricula and activities focused on the importance of cleaning and protecting the Chesapeake Bay and its tributaries, while also aligning with STEM-focused learning standards. Community programs educate residents on the importance of stewardship and how they can work together to change local behaviors regarding dumping, littering, recycling, and water conservation, among others.

(4) Priorities: MCEEC programs address EPA Educational Priority 2 (Educational Advancement) as we provide formal education programs that advance education goals and align with state academic standards while improving students' environmental literacy, and Priority 3 (Community Projects) as we involve local residents in family education programs and stewardship activities. The project also addresses EPA Environmental Priority 4 (Protecting Water), as the MCEEC is restoring and protecting a watershed along the Patapsco River, which has previously been identified by the Maryland Department of the Environment as having high levels of contaminants.

(5) Local Relevance: Programming takes place at MCEEC, 1000 Frankfurst Avenue, Baltimore, MD 21226, and in South Baltimore public schools, all located within the Patapsco River watershed, which connects Baltimore to the Chesapeake Bay, and eventually the Atlantic Ocean. The Patapsco Watershed is one of the first seven locations selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve our Nation's water systems and promote their economic, environmental, and social benefits. MCEEC is an approved Baltimore Urban Waters Initiative project.

(6) Implementation: MCEEC programs are implemented through year-long outreach lessons that provide a sustained experience in schools, hands-on field trips for school youth, a 5-week summer program, on-site weekend programs, and community events. Sub-grants will be awarded to entities that will enhance our environmental literacy programs in local schools and/or implement community environmental events for families or adults.

(7) Audience: Programming will serve South Baltimore residents, including ~650 3rd-5th grade students and 16 teachers from Title I public schools, and ~1,500 community members from toddler to adult. Many participants are low-income and/or minorities (particularly Latino), as described in section 4a below.

(8) Costs: The main types of expenses that will be requested from EPA include salaries, fringe benefits, program supplies, indirect costs, and the required sub-awards to other organizations (four sub-grants of $5,000 each).

Disregard this Budget – NOT using $80,000. Will use $60,000

(ii) Detailed Project Description

(1) What: **a)** The proposed project will include implementation of several key programs that make up the MCEEC's overall environmental education plan: 1) The School Leadership in Urban Runoff Reduction Project (SLURRP) for two Baltimore City schools (in addition to the six currently being served with other funding sources); 2) BEESMART, a five-week summer program that extends and expands the SLURRP concept into the summer months to help participating students retain academic skills while participating in environmental education; and 3) Community Engagement events and programs that engage residents of all ages in environmental literacy activities. SLURRP and BEESMART fulfill EPA Educational Priority 2 (Educational Advancement) by providing formal hands-on environmental literacy programs to students that advance their knowledge of environmental science and issues and align with Maryland's College and Career-Ready educational standards, Maryland Environmental Literacy Standards, and Next Generation Science Standards. Each program is a richly structured, project-based learning experience that supports academic achievement, increases awareness of topics such as storm water runoff pollution issues and solutions, and encourages participants to positively change their attitudes towards their environment. Community Engagement events fulfill Educational Priority 3 (Community Projects) by using interactive stewardship activities, including community clean-ups and shoreline plantings, as a hook to attract diverse audiences to the center for environmental education. Program implementation is as follows:

- **SLURRP**: This well-established curriculum and proven Meaningful Watershed Educational Experience (MWEE) has been providing hands-on environmental education to Baltimore City youth in grades 4 and 5 since 2002. Currently we are serving six schools, but this grant would allow us to expand our reach to two additional underserved city schools. The purpose of SLURRP is to provide a sustainable and replicable project for urban schools that will help them attain a "Meaningful" Chesapeake Bay or Stream Outdoor Experience as defined by the Chesapeake Bay 2000 (C2K) Agreement. Through five outreach programs and one trip to MCEEC, students use critical thinking, observation, and data collection to answer the question, "What is storm water runoff pollution, and how can we help prevent it?" The program targets critical connections between environmental science, reading, writing, and math. During the year-long program, MCEEC educators visit each participating school three times and guide 4th and 5th grade students through preparation, action, and reflection phases; teachers are trained to lead an additional two outreach programs in their classroom/schoolyard, for a total of five school-based outreach programs during the year. Programming occurs primarily on school grounds and in the immediate community. All students also participate in one field experience at the MCEEC, where they engage in hands-on learning and restoration activities. Teachers participate in one professional development workshop, as well as ongoing conversations with SLURRP educators regarding student action steps and environmental awareness.

4th Grade SLURRP Activities: In the first preparation program for 4th grade students, "What is a Watershed?," MCEEC instructors visit schools and engage students in an interactive, multimedia presentation that introduces the general concepts of a watershed and runoff pollution. Students investigate how land use affects runoff by working with a hands-on enviroscape model and grade-appropriate worksheets that emphasize reading and writing. Students also receive watershed maps and work with the interactive watershed model so that they can understand that they are part of a larger ecological system and that runoff pollution is a regional concern. They will then identify sources of pollution in their community. At the end of the first outreach, teams of students will be assigned with surveying parents and neighbors about runoff and attitudes towards littering.

Building on their newfound knowledge of runoff pollution, the second MCEEC-led outreach addresses Storm Drains and Sewers. Students learn the difference between the two: how sewers direct water to wastewater treatment plants to be cleaned, but storm drains send water straight back into the watershed with everything that it has collected along the way. Students discuss where water goes when it falls on an impervious surface compared to a pervious surface. Using microscopes, they compare and contrast water samples of rainwater taken from their school's parking lot with water samples that have traveled through the culvert at Masonville Cove. These activities should lead them to conclude that pollution on their schoolyard affects water quality for the whole region.

The third MCEEC-led outreach activity, "Future Environmental Engineers" is designed to help students understand and demonstrate the role of engineering in environmental protection. Students watch a video of outfall at Masonville Cove during a rainstorm, then work together to answer these questions: Using what we have learned about runoff, impervious and pervious surfaces, plants, and storm drains and sewers, how can this be prevented in the future? How can we slow this water down and make sure trash is not entering our water? Students are provided with household materials and asked to design and build a trash interceptor model that will be tested in real-world trials along with models made by students at other schools to see which one prevents more trash from entering the watershed. When students visit MCEEC, they will be able to watch construction of a full-scale "real life" trash interceptor being installed by the Maryland Port Administration at the Masonville Cove outfall just downhill from the Education Center on the campus. This will provide an excellent example to demonstrate the real world

implications of what they are learning in SLURRP..

Through these first three outreach programs, students come to understand that trash on the city streets will ultimately end up in the Chesapeake Bay or one of its tributaries. To help prevent this, the first teacher-led 4th-grade outreach is an action step in the form of a neighborhood trash clean-up. MCEEC staff will provide teachers with gloves, trash bags, and scales for measuring amounts of trash collected, and instructions for leading students through the activity, including proper disposal of trash and recyclables collected. Students will record data and photos on both the quantity and types of trash collected and try to determine the probable source of the trash.

The second teacher-led outreach will be "Missing Creatures in Maryland." Students will learn how storm water runoff and land degradation has threatened some of Maryland's most unique and valuable wildlife, like the hellbender salamander. They will propose ways to save these important species by creating a "MISSING" poster to be displayed in their schools, and will present what they have learned to other students, to help spread the knowledge that human activities are negatively affecting animal life in the Chesapeake Bay watershed.

As an additional outreach, 4th grade students will take a field trip to participate in environmental education activities at MCEEC. This allows students to reflect on all that they have learned during the SLURRP experience by seeing the watershed in action. Field trip activities are richly structured, STEM-based learning experiences that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. By conducting projects and experiments at the edge of the Patapsco River, students will be able to actually see the impact of storm water runoff pollution on the harbor, the river, and its tributaries. This reflection activity synthesizes all the information that students have learned and explored together: an understanding of the watershed system, basic concepts in river and estuary ecology, and the impact of the urban environment and human activity on these interrelated ecosystems.

5th grade SLURRP Activities: During the first 5th grade SLURRP outreach, students will recap what they have previously learned in SLURRP regarding the Chesapeake Bay and the role students play in their communities in relationship to the Bay (these will be students that participated in SLURRP during the previous year with other funding sources). Using their previous knowledge, the first MCEEC-led activity of the year is to create a "Schoolyard Report Card." SLURRP staff, students, and teachers will walk the entire area of their schoolyard and survey and identify amounts of impervious surface or other problem areas that contribute to storm water runoff. They will grade the schoolyard on elements such as amounts of green space vs. asphalt, and areas where trash is prone to collect. They will discuss improvements they can make so that their schoolyard can more positively impact the condition of the Chesapeake Bay.

The Schoolyard Report Card preparation phase will lead into the next outreach, "Storm Drain Mapping." Building on what they have learned, students will understand that runoff pollution within any part of a watershed can affect areas downstream of the source of that pollution. Students will be able to comprehend the concepts of sub-watersheds by using GPS units to map elevations on their schoolyard, including all of the storm drains on the school property and surrounding area. They will identify land use near the storm drains, and assess the potential pollutants that may contribute to storm water runoff.

The first teacher-led outreach will have students creating a brochure educating the community about storm water runoff. The Center for Watershed Protection's "Teacher's Guide for Creating a Water Monitoring Program" is used as a reference for this project. With the help of carefully constructed worksheets, students will create informational brochures to be distributed to the residents of the community where storm drain stenciling will occur. The brochures contain information on where the storm drains empty, and the importance of keeping the drains clear of trash and other pollutants. The brochure will notify the community that the students will be out stenciling storm drains, explain why it is being done, and provide tips for residents to reduce storm water runoff on their own.

Following creation of the brochure will be a "Storm Drain Stenciling/Community Clean-Up" action project. Throughout this activity, students are challenged to analyze the flow of storm water on their campus and make note of any problem areas, such as regions of the street or schoolyard that flood during rain events. Students then review storm drain maps from the Baltimore Department of Public Works and try to locate the outfall locations for the storm drains in their neighborhood so that they can see where their storm water ultimately goes. With this knowledge, students are able to understand why they should complete the action step of stenciling storm drains. Under the supervision of MCEEC staff, students stencil the storm drains in their neighborhood with the words "Chesapeake Bay Drainage – Do Not Dump"; after stenciling is complete, they will conduct a community clean-up.

The second teacher-led outreach will be another action step: "Redesign Your Schoolyard." Using the information gleaned during the preparation phase at the start of the school year, students and teachers will work together to create a multi-year planting design of a functional and aesthetically pleasing green area unique to each

school. Students will investigate all of the benefits of green space, such as reduction of runoff, erosion control, the establishment of habitat, and increased cooling of the school property. Through professional development, teachers will be encouraged to seek funding for implementation of these designs. These designs may be implemented and expanded in future years with additional plantings and wildlife habitat enhancements, such as birdhouses and butterfly gardens. SLURRP-trained teachers will help students and school representatives to develop and incorporate environmentally friendly maintenance strategies, such as limited use of pesticides and fertilizers. Students will synthesize all that they have learned about storm water runoff and how to prevent it with their designs and will create posters and blueprints that they will present to their classmates.

The 5th grade reflection phase will include participation in the annual Masonville Cove Environmental Festival, during which students will reflect on their SLURRP experiences while planting native species, picking up litter, composting their lunch waste, and learning about native wildlife. They also have the opportunity to speak with representatives from a variety of local environmental organizations who host stations addressing urban runoff pollution and what people can do to help prevent it, which provides a direct link to their work throughout SLURRP.

As part of SLURRP, integrated professional development for classroom teachers will be delivered, with the result that teachers will be able to actively lead two outreach programs. The professional development will familiarize teachers with the SLURRP environmental content, help them reinforce academic instruction in areas of student need, and strengthen the continuity between SLURRP subjects and required content standards. LCF's SLURRP staff will provide training and materials that will prepare teachers to lead two of the five outreach programs on their own in their classrooms/schoolyards, including action and reflection phases. This is a change from our past years of SLURRP implementation, in which LCF staff provided an entire package of programming for the entire year and conducted all outreach programs. However, with Maryland's new Environmental Literacy graduation requirement, we are placing a focus on helping prepare teachers with the expertise necessary for them to incorporate and reinforce the appropriate environmental science standards necessary to meet classroom STEM and literacy outcomes and align programming with Next Generation Science Standards. We hope that by giving ownership of a portion of the program to the teachers, that they will be encouraged to be environmental role models for their students. Throughout the year, teachers will also engage in discussions regarding SLURRP participation, which will allow SLURRP staff and teachers to self-assess their instruction around their students' performance.

- **BEESMART**: This 5-week full-day summer program for rising 3rd-5th graders uses E-STEM projects related to real-world local environmental problems as a vehicle for students to retain reading and math levels throughout the summer. The program will serve 60 students who either participated in SLURRP during the previous school year, or who will participate in SLURRP in upcoming years, and therefore further enhances and expands environmental science education for youth through the summer. This creates a continuity of learning from school year to summer that is expected to have a significant impact on the achievement levels of participants, in environmental literacy as well as reading. This continuity will also be advantageous as students continue on in school and will be better prepared to meet Maryland's Environmental Literacy graduation requirement.

BEESMART operates at MCEEC and on the campus of two Baltimore City public schools. Each morning, students receive one and a half to two hours of academic instruction including small-group coaching sessions with a Reading Specialist and Educator-led STEM lessons (on some days these will occur onboard LCF's historic buyboat Mildred Belle). After lunch, students will be engaged in a literacy-focused lesson infused with one of the five weekly STEM themes: Healthy Environment, Healthy Water, Healthy Habitat, Healthy Food, and Masonville Memories. Afternoons will be filled with a variety of hands-on STEM-focused academic and enrichment activities.

During BEESMART, students have the unique opportunity to build NOAA-designed underwater Remotely Operated Vehicles equipped with cameras, called Aquabotz, which support student investigations into underwater areas that are not otherwise accessible. Students also learn computer and resource analysis skills as they research topics to solve a problem, and are introduced to tablet use as they investigate the impact of litter on land and water, study water quality, and explore topics such as decomposition. They use their skills and imaginations to solve local environmental problems caused by improper trash disposal and illegal dumping. The following activities will occur multiple times within the program: Service Learning projects (i.e neighborhood and watershed clean-ups, storm drain stenciling), Computer Lab E-STEM research, and activities chosen by students.

- **Community Engagement Programs**: LCF will plan, develop, and implement free community environmental literacy events for South Baltimore residents. Community Education Coordinators will plan, advertise, conduct, and track an average of five community education programs per month. Programs will take place primarily on weekends, and will provide environmental science education for preschoolers, school-aged children, adults, and families. The Community Education Coordinators will work with volunteers and represent the MCEEC at community meetings and events, and will also work with local churches and community groups to create new opportunities for community participation on the Masonville Cove Campus. For example, in the coming year, we

will be working with the Hispanic Access Foundation and a local church group to develop volunteer opportunities and outreach programs for the growing Latino population in the community.

Weekend programs for younger children and their families may include Science Alive for Kids Under Five, Budding Biologists (for children ages 5-7), Habitat Heroes (for children 8-13) and programs for the whole family. In each program, a naturalist provides age appropriate hands-on lessons, crafts, and games introducing children to a variety of environmental issues, including discussions about birds, mammals, watersheds, and plants.

Community programs are held twice a month to introduce local residents to the MCEEC and to give a background on the reason for the center and the history of industrial dumping and abandonment of the site in previous decades. These programs are designed to inform residents of the wealth of natural resources that exist in their urban neighborhoods and encourage them to take part in the free community activities that are offered. In addition, free Guided Walks with a Maryland Master Naturalist are offered regularly, weather permitting.

Finally, MCEEC will host bi-annual community shoreline clean-up events in the spring and fall. Volunteer leaders from a community support group called Friends of Masonville Cove will work with participants to record the amount and types of debris collected from the shores around Masonville Cove. Individual items will be categorized according to material type (i.e. plastic, styrofoam, wood, etc.); particular large items of interest, such as furniture or tires, are counted separately. This data will contribute to large-scale efforts such as the International Coastal Cleanup and Project Clean Stream, and will be used by organizations such as the National Aquarium's Conservation Team, and Waterfront Partnership of Baltimore's Healthy Harbor Initiative to help assess the overall health of the ecosystem. Over time, comprehensive data collected by volunteers helps paint a picture of the types of debris that plague the Bay and can demonstrate how debris changes as community/consumer trends change over the years.

b) MCEEC programming addresses the EPA's Environmental Priority 4 (Protecting Water), as one of the goals of all MCEEC programming is to reduce storm water runoff pollution and improve water quality in the Patapsco River watershed. Activities at MCEEC align with other local initiatives focused on the same goal, such as Baltimore City's Waterfront Partnership's Healthy Harbors Initiative, which has a goal of cleaning the harbor to be swimmable and fishable by 2020. As described in greater detail above, our programs address this with water quality testing, community clean-ups, public outreach about litter and pollution, and "greening" local schoolyards.

For the last several decades, South Baltimore communities have had little access to their local waterways, and the land surrounding Masonville Cove was considered a community dumping ground. This caused significant amounts of trash to be deposited into the Patapsco River, as well as creating pollution due to storm water runoff. MCEEC and its programs, in partnership with the Maryland Port Administration (MPA), are the cornerstone of a large-scale neighborhood revitalization project that aims to improve Title I schools, provide access to natural resources located on the waterfront, and encourage economic growth while protecting the environment. To date, over 60,000 tons of debris has been removed from the site, including old appliances, tires, construction waste, and rubble. MCEEC, a designated Urban Wilderness site with 54 acres of land and 70 acres of water, is now providing the first public waterfront access for residents of these South Baltimore communities in generations. In 2013, the MCEEC was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

(2) Why: a) The goals of environmental education programming at MCEEC include the following: To provide hands-on environmental education programs for approximately 650 Baltimore City students in 2016-17 that meet learning standards and help prepare them for Partnership for Assessment of Readiness for College and Careers (PARCC) testing (through SLURRP) and help reduce summer learning loss (through BEESMART), to effect a measurable reduction of runoff pollution in the neighborhoods of participating schools due to the implementation of various storm water pollution reduction strategies, to create public awareness in the schools' communities about storm water runoff pollution issues and solutions, and to attain a positive change in attitudes towards their environment for both students and adults in the community.

MCEEC has chosen to focus on these goals for several reasons. Urban settings have traditionally offered limited opportunities for local environmental projects, especially on school properties. Vast amounts of impervious surface, large populations, commercial and industrial land use, and limited green space all contribute to the unique challenges of creating and implementing environmental literacy programs in Baltimore City. Urban schools often must travel out of their communities to find these experiences, and students sometimes have difficulty connecting these experiences with their daily life in the city. Also, Baltimore City schools are often financially challenged and burdened with large class sizes, making outdoor experiences difficult or unattainable. Teachers often struggle to implement required curriculum and do not have time or resources to involve students in "extra" projects.

MCEEC programming was developed to address these challenges. For instance, SLURRP directly supports the recommendations of the Chesapeake Bay Agreement and Maryland's Partnership for Children in Nature by bringing relevant environmental education into Baltimore City classrooms, promoting stewardship, and getting city students to interact with and appreciate their local outdoor environment. All MCEEC environmental literacy

programs encourage behavioral change that benefits the environment through hands-on activities that bring students and the community in direct contact with their local environment, where they can personally view the effects of careless treatment of the land and water in contrast to what may be if people take care of their natural surroundings.
b) We are focusing on the EPA's educational and environmental priorities of, respectively, Educational Advancement and Protecting Water, because the development of Masonville Cove into an Environmental Education Campus and the related programming directly affect the restoration of the Patapsco River watershed, while educating youth and the community about how it was neglected in the first place, how to avoid that in the future, and how and why to improve conditions now. Participants are directly involved in making their environment cleaner and healthier, which encourages a habit of stewardship. Over the past 30 years, LCF has provided hands-on environmental literacy programs that have successfully encouraged underserved youth and adults alike to take a close look at their behaviors and habits as they pertain to the environment. We have seen these participants develop an understanding of how dumping, littering, and pouring pollutants down the drain directly affects the watershed in which they live. The activities in each MCEEC program address ways that people can change their habits, and demonstrate that small actions undertaken by many people (throwing away trash, recycling, conserving water, etc.) can culminate in a positive measureable impact on the environment through increased stewardship. For example, SLURRP allows students to work within their own urban neighborhoods to discover an important environmental issue, think about how their personal actions can affect this problem, and seek and implement solutions.

We are working toward the EPA priority of Protecting Water because the Patapsco River has been identified by the EPA and Maryland Department of the Environment as being impaired by heavy loads of toxic substances, nutrients, and suspended sediments. Masonville Cove is located on the southern side of Baltimore's Harbor on the Middle Branch of the Patapsco River in Baltimore, MD. The surrounding watershed is approximately 76% urban and 42% impervious with medium to high-density residential development and industrial areas covering much of the watershed. In this highly urbanized watershed, trash and debris are a huge problem, affecting not only water quality but quality of life in the surrounding neighborhoods. MCEEC programs address this issue with a multi-faceted approach that is directed to a variety of audiences who can make a difference in cleaning up their local watershed and creating a healthier and more attractive environment in which to live.
c) The need for our project is evident in the outcomes delineated in the Education and Outreach section of the revised Chesapeake Bay Watershed Agreement, which include an increase in student understanding of the watershed through teacher-supported Meaningful Watershed Educational Experiences and rigorous inquiry-based instruction, as well as an increase in the number of schools in the region that reduce the impact of their school building and grounds through student-led protection and restoration projects. Also, the Maryland Partnership for Children in Nature states that all Maryland young people should have opportunities to connect with the natural world and grow to become informed and responsible stewards. Key recommendations of the partnership include strengthening students' connection to nature during the school day, and reaching out to underserved communities.

In addition, the US Fish and Wildlife Service Chesapeake Bay Field Office (CBFO) has drafted a wildlife management plan for Masonville Cove that utilizes a landscape management strategy and identifies long-term management goals and strategies for the entire Patapsco River watershed. The landscape conservation approach to Masonville Cove and the Patapsco watershed is one that is reflected in the CBFO strategic plan and is intended to be implemented with a variety of state and federal partners. Finally, in 1996, the Patapsco River was identified as one of the 50 most polluted rivers in the country due levels of heavy metals, PCBs, and phosphorous in the water (http://www.ewg.org/research/dishonorable-discharge/50-most-polluted-rivers-country). Clean up efforts over the past 15 years have made progress, but there is still work to be done. In 2011, the Patapsco Watershed was selected for help from the Urban Waters Federal Partnership, which was designed to reconnect urban communities with their waterways and promote their economic, environmental and social benefits through local and Federal partnerships. Baltimore is a federally designated Urban Waters Initiative site and Masonville Cove is an approved Baltimore Urban Waters Initiative project that epitomizes the goals of the Initiative.
(3) How: a) MCEEC management and educational staff and six schools are in place, and program implementation designs are established in order to immediately begin working toward program outcomes once funding is in place (including selecting two additional schools if funded). All MCEEC programs are designed to achieve outcomes using the 5 E's of STEM instruction: Engage (students are introduced to a topic that has real-world relevance to them), Explore (students investigate the problem through research and experimentation), Explain (students relate what they have learned through writing and speech), Extend (students think about how this problem impacts not only their community, but the wider environment and Chesapeake watershed as a whole), and Evaluate (students brainstorm solutions to the problem, articulate their ideas, and consider solutions presented by others).

SLURRP and BEESMART enhance environmental literacy through hands-on experiments that test various forces of nature and reinforce how math and science are integral to the environmental impact of things that people

do on a daily basis. Community programs provide fun and age-appropriate environmental literacy topics and hands-on projects to excite participants' imaginations and introduce them to environmental education. Community talks, environmental festivals, and neighborhood clean-ups are offered for adult residents to help them understand the negative implications of littering and dumping on the environment, both locally and globally, and to show how they can be part of the solution by properly disposing of trash, recycling, and advocating for the community.
b) SLURRP and BEESMART let students use hands-on projects to solve real-world environmental issues that are affecting their community; most notably, reduction of storm water runoff pollution and improving water quality. Students and community members will record and weigh the types of trash and recyclables collected during clean up events, and the numbers and types of shoreline plants that are planted during events. We will also keep track of the number and locations of storm drains stenciled. Water quality testing will be performed and results monitored for changes. By learning about and visibly helping to improve their neighborhoods, students will be encouraged to become leaders and may develop a change in attitude that will grow into a life-long community stewardship.
c) Living Classrooms Foundation will use the 25% sub-award program to attain our goals and objectives by choosing four (4) sub-grantees who will be granted $5,000 each ($20,000 total, or exactly 25% of the $80,000 requested) for projects that advance our goals of increasing environmental knowledge and encouraging environmental stewardship in the neighborhoods surrounding MCEEC and that also work to improve the Patapsco watershed. We are considering a grant to the National Aquarium Conservation Team for community shoreline plantings in the vicinity of MCEEC to help stabilize the shoreline, as well as create and enlarge native plant gardens; the funding will be used for plants and staff time to organize and implement the planting sessions and associated education for the community as to why these plants are important to restoring the environment and habitats for local species. We are also considering funding for the Hispanic Access Foundation and a local church group, Pathway Church of God, both of whom partnered with us in 2015 to engage the local Latino population in urban environmental education projects including storm drain stenciling, trash collection, and planting milkweed to attract monarchs. Finally, we will approach the local public high school, Ben Franklin High School at Masonville Cove about a sub-grant award that will allow students and teachers to fund an age-appropriate community environmental project. We will carefully vet our sub-grantees through a formal application process to ensure that they will also address the EPA's required education and environmental priorities, and are planning to approach organizations that share our goals of increasing environmental literacy. Prospective grantees will be asked to complete essays describing project goals and objectives and how they align with the EPA's goals and objectives. MCEEC staff will provide oversight on projects conducted by sub-grantees to ensure that they achieve expected outputs and outcomes.
(4) Who: a) Our target audience is South Baltimore residents from Brooklyn/Curtis Bay and Cherry Hill, including underserved 3rd-5th grade students and teachers from eight Title I public schools (~650 students and 16 teachers), and approximately 1,500 community members including toddlers and parents in Saturday programs, and adults of all ages who attend community events. The total number of participants over the year will be approximately 2,200. The communities served reflect income, education, and employment statistics more dire than Baltimore City as a whole. In 2013, median annual household incomes in these areas ranged between $23,918 and $34,420 (compared to the citywide median of $41,385), family poverty rates between 28.7-40.2% (compared to 19.1% citywide), and unemployment rates between 21.2 and 21.9% (compared to 14.2% citywide) (www.bniajfi.org). A third of the adult population (over 25) does not have a high school diploma or GED; less than 10% have attended college. Over 90% of students in these south Baltimore communities are eligible for free or reduced lunches, and chronic absence rates (missing more than 20 days of school) are high, ranging from 19% in elementary school up to 44% in high school. Students to be served are primarily minorities. In Cherry Hill, 96% of public school students are African American, and 2% are Hispanic; in Brooklyn/Curtis Bay, 55.8% of students are African American and 11.9% of students are Hispanic (www.bniajfi.org). Approximately 50% of BEESMART participants are expected to be Hispanic, and a significant Hispanic population is expected to be involved in community events.

Until MCEEC opened, these community residents had little insight or information about the environmental and water quality concerns in their own backyard, which led to the implementation of coordinated school and community outreach programs for these residents. MCEEC programming works with urban youth to help them understand and prevent the environmental effects of pollution and runoff in their own backyards; this will improve their neighborhoods while encouraging them to become the community's future leaders. Our Community Programs reach out to diverse audiences, from toddlers to adults, who have not otherwise had access to meaningful hands-on environmental literacy education. Attracting these audiences is important to our goals because community residents ultimately hold a responsibility for keeping their neighborhoods clean and reducing their own negative actions that harm the environment. Overall, MCEEC gives South Baltimore residents direct evidence of how an area that was historically a recreational waterfront but became an overgrown and trash filled dumping ground can be reclaimed into a natural, beautiful recreation area if proper environmental actions are taken and maintained.

b) SLURRP recruitment is accomplished through direct contact with school administration and teachers. MCEEC staff will request a meeting at local public schools, introduce SLURRP, and discuss how the program is designed to increase academic skills and PARCC scores, then will develop a schedule with teachers. We have found that schools are often eager to be chosen, as SLURRP was designed specifically to meet the environmental education needs of Baltimore City students, and the program has developed a very positive reputation over the last decade. Teachers have the incentive of professional development credits for the school year. BEESMART students will be recruited through SLURRP, as SLURRP educators will use contact time during the school year as an opportunity to promote BEESMART to students in their classrooms and will also disseminate written information about the program and its location/transportation to families in the community and/or will be available to speak to parents who have literacy struggles. Program information will be made available in Spanish as well, because a large percentage of Hispanic families are served by these schools. Students will be selected through a cooperative identification process involving teachers, administrators, BEESMART staff, parents, and students. Youth participating in BEESMART from year to year will have priority to continue in the program over new students, who will be placed on the waiting list.

In addition, we will continue to promote our year-round weekend programs for youth and families throughout the community via print media and social media, as well as promoting special community events for all ages. Students participating in SLURRP and BEESMART will be encouraged to bring family members to community events. We have also begun to work with the Hispanic Access Foundation (HAF), an organization that works to promote responsible citizenship, educational attainment, and active engagement in improving the health, environment, and financial well-being of Hispanic families throughout the US; locally they are helping MCEEC to partner with Latino groups through local churches. HAF has learned that Hispanics are passionate about their public parks and open spaces. Therefore, environmental conservation ranks high on Latinos' priority list, and HAF will help us attract the growing Latino population in the community to participate in MCEEC programs and events.

(iii) Project Evaluation

(1) MCEEC Programming is evaluated through both qualitative and quantitative methods to measure how we achieved the following objectives: improved knowledge of storm water runoff issues, change in attitudes regarding pollution, increased attitude of environmental stewardship, decrease in trash and runoff pollution in schoolyards and neighborhoods, increase in student achievement through targeted instruction, and increased community awareness of local land use and environmental issues. Short term outcomes are measured by the number of participants in each program, the number of community programs offered, the weight and types of trash and recyclables collected during community clean-ups, the number and location of storm drains stenciled, and the number of brochures or outreach materials distributed by SLURRP students. The short-term outcomes for sub-grantees are to select the sub-grantee through an application process and work together to put their proposed program in motion.

(2) Medium and long term outcomes are measured by continued participation in SLURRP and MCEEC community programs, the implementation of BEESMART as a summer extension of SLURRP, additional pounds of trash and recyclables collected, and additional storm drains stenciled. A Spring Festival will be held at MCEEC to further promote environmental literacy for students and the community, and will include events such as shoreline plantings and litter collection. Additionally, program participants are surveyed (pre and post-event) about their change in knowledge of urban environmental issues and feelings about stewardship in their community. Water quality will be tested at various points in the program to test the impact of trash collection from school yards and neighborhoods. MCEEC will also record the number of participants in each program. Sub-grantees will be required to submit data indicating the impact of their shoreline plantings/restoration projects, increase in wetland/native plant habitat in the community, and increase in participants' environmental knowledge and attitudes toward stewardship.

The long-term educational impact of the program is evaluated through student and teacher evaluation forms, and increases in student knowledge. Periodic written assessments are used to gauge student knowledge in the content area and target instruction of SLURRP and BEESMART. The program will measure increases in student academic achievement using activities that align with Maryland College and Career Ready Standards and Next Generation Science Standards. Students complete pre- and post-trip evaluation forms to indicate what they have learned about runoff prevention and environmental stewardship. Teachers will complete feedback forms to evaluate academic and social impact on students, the effectiveness of the collaboration, and to provide direction for future efforts. Results will be compiled and compared to determine the impact of the program on participants.

(3) LCF has three decades of experience with successful compliance of federal grants. Our experienced accounting department will work closely with the Program Director to ensure that awarded grant funds and sub-grants are expended in a timely and efficient manner. Copies of all paperwork relating to the grant award including deadlines and procedures for reporting are distributed to the Program Director, the Accounting Department's Grants Manager, and development team. Our past success with federal grants as described in the Programmatic Capability and Past Performance section indicates our experience with managing grant funds appropriately and in a timely fashion.

(b) Detailed Budget

(i)

Line Item	EPA Funds	Non-EPA Funds	Total Project Cost
Personnel			
Lorraine Warnick, MCEEC Director: 25% of $68,750		$17,188	$17,188
MCEEC Educator: 100% of $40,000	$30,000	10000	$40,000
MCEEC Educator: 100% of $30,000	$15,000	15000	$30,000
2 Masonville Educators: 2 x 75% of $35,000		$52,500	$52,500
Weekend Community Educators: 2 x 30% of $30,000		18,000	$18,000
Total Personnel	*$45,000*	*$112,688*	*$157,688*
Fringe @ 12% (FICA, SUTA, Health Insurance)	$5,400	$13,523	$18,923
Supplies			
Program supplies (hand-outs, paints & brushes for stenciling, art supplies for posters, teacher materials) for 2 schools @ $1000 each	125	$1,875	$2,000
Other			
Sub-awards: 4 grants @ $5000 each	$20,000		$20,000
Subtotal	***$70,525***	***$128,085***	***$198,610***
Indirect Costs @ 18.8%	$9,475	$23,727	$33,203
Grand Total	**$80,000**	**$151,813**	**$231,813**

(ii) The non-Federal match requirement will be met with funding from Maryland Environmental Services.
(iii) Exactly 25% of the $80,000 request will be awarded as four sub-grants of $5,000 each.
(iv) EPA funding will allow us to meet the costs of serving two more Baltimore City Schools with SLURRP, while six schools will be served with matching funding (for a total of eight schools served).

Disregard

(c) Appendices

(i) Timeline

September 2016 – August 2017

September 2016

- Acceptance of award
- Correspondence with Baltimore City Public Schools about selection of all participating schools
- Correspondence with potential schools
- Begin selection of subgrantees
- Finalize selection of schools
- Have pre-program meeting with principals and teachers
- Create year-long programming schedule for each school
- MCEEC weekend community education programs

October 2016

- Teacher professional development workshop
- Conduct student pre-program assessment and survey
- Begin preparation phase programming
- Begin tallying teacher feedback forms for each program
- Begin school field programs at MCEEC
- Continue selection of subgrantees
- MCEEC weekend community education programs

November/December 2016

- Continue preparation phase programming
- School field programs at MCEEC
- Shoreline clean-up event at MCEEC
- Subgrantee selection finalized
- MCEEC weekend community education programs

January/February 2017

- Complete preparation phase programming, prepare for action phase programming
- Mid-year student assessment and survey
- School field programs at MCEEC
- MCEEC weekend community education programs

March/April 2017

- Action phase programming
- School field programs at MCEEC
- MCEEC Environmental Festival
- Subgrant implementation
- MCEEC weekend community education programs
- Recruitment for BEESMART Summer Program

May/June 2017

- Reflection phase programming
- Conduct student post-program assessment and survey
- Tally all survey and feedback form results
- Conduct end-of-year meeting with teachers
- Shoreline clean-up event at MCEEC
- Subgrant implementation
- MCEEC weekend community education programs

- BEESMART Summer Program Begins

July/August 2017

- BEESMART Summer Program operates
- Subgrant implementation and finalization

(ii) Logic Model

Outputs	Outcomes		
	Short-term	**Medium-term**	**Long-term**
Management & implementation of education programs in schools and MCEEC	SLURRP outreach programs and MCEEC field experiences for 2 Baltimore City schools (in addition to the six schools served with non-EPA funding—8 total schools served) Collection of trash Storm drains stenciled	Continued outreach to schools Spring Festival at MCEEC BEESMART Summer Program as extension of school year SLURRP Continued reduction of trash in community More storm drains stenciled	Improved environmental literacy and knowledge of storm water runoff issues Change in attitudes regarding pollution Increased attitude of environmental stewardship Significant decrease in trash & runoff pollution in schoolyards and neighborhoods resulting in improved water quality Increase in student achievement through targeted instruction
Planning and implementation of community education programs at MCEEC	Community education programs at MCEEC operate on regular schedule	Increased participation in community events at MCEEC Spring Festival at MCEEC	Increased community awareness of local land use and environmental issues Increased environmental stewardship Increased community visitation to MCEEC as a community resource
Field trips	Fourth and fifth grade field trips to MCEEC	Improved knowledge of local environmental issues and potential action steps towards solutions	Change in attitudes regarding pollution Increased attitude of environmental stewardship Increase in student achievement through targeted instruction
Promote Programs and Events at MCEEC	Creation of brochures	Distribution of brochures; regular updates to SLURRP website	Increased attendance at community events
Sub-grants to partnering entities	Determine sub-grantees Creating partnerships to further the environmental education goals	Shoreline planting projects Native plantings and restoration projects Latino Community Environmental Outreach	Improved environmental literacy and knowledge of urban environmental issues Change in attitudes regarding pollution Increased environmental

	✓	High school partnership projects	stewardship, especially in the local Latino community Increased wetland and native plant habitat resulting in improved water quality

(iii) Programmatic Capability and Past Performance

Organizational Experience and Capacity

Living Classrooms Foundation (LCF) has a long history of completing projects and achieving the stated goals of each. We have an excellent reputation for yielding quality results and adhering to the requirements of grants and agreements from diverse funding streams, both government and private sector (please see below for details).

Living Classrooms Foundation was established in Baltimore, Maryland in 1985. Participation in Living Classrooms' programs has grown from 100 students in a single program to now over 44,000 students a year enrolled in diverse programs that take place on Living Classrooms' campuses in Baltimore and Washington, DC, in schools, in neighborhoods, and aboard ships. For over 30 years, Living Classrooms has been a leader in education, workforce development, and positive social change in the Baltimore-Washington region, earning local and national recognition for our results. Living Classrooms Foundation addresses head-on some of the most challenging issues affecting disadvantaged children and young adults, and believes that every student, even those residing in distressed communities, can reach his or her potential if provided a continuum of resources and quality programming that is effective and structured.

Living Classrooms offers a distinctive competency in experiential learning—literally learning by direct experience, or what the Foundation calls "learning by doing." We apply our skill in three program areas: 1) Educating students through our own charter school, through after-school and supplemental education programs, and through environmental experiences, with special emphasis on serving students who are disadvantaged or live in high-risk environments; 2) Eliminating barriers to success for young adults and families, especially those living in poverty, through community development, workforce preparation, and life skills training; and 3) Educating the general public, and students in particular, about the significance of the region's maritime heritage and its role in shaping who we are as a community and nation.

In 2009, LCF joined with the Maryland Port Administration (MPA) to become the lead educational and operational partner of the Masonville Cove Environmental Education Center (MCEEC), a unique, urban nature facility located along the Patapsco River's Middle Branch. The Center currently includes a "green" building with science labs, over 50 acres of land, 70 acres of water, picnic areas, a bird sanctuary, hiking trails, a pier, and several tidal and non-tidal wetland projects. Programs at the MCEEC provide richly structured, STEM-based learning experiences for students that support academic achievement and empower Baltimore's youth to make a positive change in their environment. MCEEC programs emphasize both the Cove's natural attractions and the challenges of the urban environment, concentrating on environmental issues such as watershed dynamics, water quality, plankton/biofilm studies, wetland restoration, and eutrophication. The MCEEC hosts the annual Masonville Cove Environmental Festival, and has become a hub where SLURRP schools can learn more about the nature of their urban environment while participating in various restoration projects. To date, MCEEC has served 14,568 students and 670 teachers with educational outreach and community environmental programming, and in 2013, the site was named the country's first Urban Wildlife Refuge Partnership by the US Fish and Wildlife Service.

LCF has been very successful in operating educational programs and schools as well. Our experience with providing successful out-of-school time programming for youth is extensive. Our CARE (Comprehensive Academic, Recreation, and Enrichment) After School/Summer Program serves low-income youth in East Baltimore, and has consistently exhibited positive results since it began in 2006. In the 2014-2015 school year, 88% of students in CARE improved by one letter grade in Math, and 93% improved by one letter grade in Literacy/Language Arts. 82% missed fewer than 10 days of school. In addition, our BUGS (Baltimore Urban Gardening with Students) After School Program has served at-risk youth with academic enrichment based on environmental horticulture for the past 16 years. It has become a national model program and was awarded the 2009 William S. White Program of Distinction Award by the US Department of Education. In 2014-15, The Crossroads School (a Baltimore City

charter middle school operated by Living Classrooms) was a top performing City middle school: 88% of students ended the year with a GPA of 70% or higher, 58% with a GPA of 80% or higher, and 16% with a GPA of 90% or higher (percentages of 4.0 GPA). Living Classrooms led a successful restructuring of Commodore John Rodgers, a Baltimore City elementary/middle school that was selected as a "turn-around" school in 2010 due to poor academic performance; Living Classrooms staff has not only led this to becoming the top performing turn-around school in the City, but the school has tripled its enrollment and also become competitive with the City's higher performing schools in standardized tests and student grades.

Living Classrooms Foundation currently operates on an annual $15 million budget. The Foundation has a long track record of compliance and fiscal responsibility with federal, state, local, corporate and foundation grants ranging up to and over $1,000,000. Major sources of funding have come from the Harry and Jeanette Weinberg Foundation, Under Armour, the W.K. Kellogg Foundation, the Steve and Renee Bisciotti Foundation, the Cal Ripken Sr. Foundation, the Open Society Institute, Joe and Debra Weinberg, and Constellation Energy. Living Classrooms Foundation also receives funding from the US Departments of Labor, Education, Health and Human Services, Justice, and Interior; the State of Maryland; and City of Baltimore.

Staff Qualifications & Key Personnel

Living Classrooms Foundation is operated by a permanent staff of 243; this number grows to over 300 during summer programs. Leadership is provided by James Piper Bond, President and CEO, Nicole Ruocco-CFO, Thara Taylor-Vice President of Development and Communications, Bill Cunningham-Vice President for Government Relations, Steve Bountress-Vice President for Workforce Development, Scott Raymond-Vice President for Education, and Christopher Rowsom-Vice President for Maritime Heritage Programs. These staff members have been with Living Classrooms for periods ranging from eight to twenty-eight years with one exception--CFO Nicole Ruocco joined the staff in 2013.

Key staff members that are directly involved in managing and implementing the environmental education programming at MCEEC are Christine Truett, LCF's Director of Education; Lorraine Warnick, Director of the MCEEC, and Christine Redline, Assistant Director of the MCEEC and Director of BEESMART. Ms. Truett has worked with Living Classrooms Foundation for 23 years, starting as a shipboard environmental educator, and moving up to Assistant Director of Education and later Director of Education, a position she has held since 2000. Ms. Truett holds a BS in biology from Mary Washington College. She has extensive experience in directing environmental education programs, including oversight of environmental education programming at MCEEC, and has an excellent track record of successfully operating programs using federal, state, and private funding. She will be in charge of program oversight, including grants management and reporting.

Ms. Warnick began working at Living Classrooms Foundation as a shipboard educator in 1997. She has since been a Program Director, Director of Environmental Education, and in 2009 became the Director of the MCEEC. Ms. Warnick holds a BS in Biological Sciences from the University of Maryland, and a MS in Environmental Science and Policy from Johns Hopkins University. She is responsible for the oversight of the programs discussed within this application, and has extensive experience implementing grants, managing budgets, grant reporting, and program evaluation. Ms. Warnick will ensure that all program curricula meets the educational and environmental outcomes of the proposed programming.

The Assistant Director of the MCEEC is Ms. Christine Redline. Ms. Redline holds a Bachelor's Degree in Environmental Studies from Washington College in Chestertown, MD, and a Master of Science Degree in Environmental Education from Lesley University in Cambridge, MA. She began working with Living Classrooms Foundation as an Outreach Educator for the SLURRP program in 2006, became the Education Supervisor at MCEEC in 2008, and since 2014 has served as the Assistant Director of MCEEC. She is also the Director of the BEESMART Program. Ms. Redline is experienced in providing environmental education programming that aligns

with Maryland's College and Career Ready educational standards, and Environmental Literacy standards, coordinates programs and field trips, and trains volunteers and interns in the best practices of environmental education. Ms. Redline was previously an environmental educator at Denison Pequotsepos Nature Center in Mystic, CT and Echo Hill Outdoor School in Worton, MD. She has experience with providing environmental education to inner city youth in underserved communities. All of the staff members that she oversees are well trained to effectively provide SLURRP, BEESMART and other community programs in such a way that they have maximum impact on the participants. Ms. Redline will ensure that programs are being operated to meet the proposed educational and environmental outputs and outcomes.

SLURRP is led by Ms. Michelle Koehler, Lead Educator at MCEEC. Ms. Kohler holds a BA Degree from Towson University, and has been an educator at Living Classrooms Foundation since 1997, directing a variety of after school and summer programs. She has extensive experience in successfully leading hands-on environmental education programs for students, as well as with grants management and reporting. Ms. Koehler is also the Assistant Director of the BEESMART program. She will ensure that all program curriculum is being presented properly to students and appropriately assessed by MCEEC educators and classroom teachers.

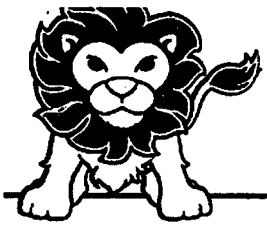
Previous Federally Funded Assistance Agreements

Over the past 30 years, Living Classrooms Foundation has received countless federally funded assistance agreements from such diverse agencies as the United States Departments of Education, Justice, Labor, Health and Human Services, and Interior; and NOAA. Living Classrooms has also received previous EPA grants, in 1997, 2004, and 2014. The projects that resulted from all of these funding agreements were successful, completed within the proposed time frame, and reported on within the required parameters of each individual agreement. Grant details for the past three years are as follows:

EPA-EE Grant (2014-15) Assistance # NE-963298-01-0: In 2014, Living Classrooms Foundation was awarded a $75,000 grant through the EPA EE Grant Program (Opportunity Number EPA-EE-13-01, CFDA Number 66.951) for Masonville Cove Environmental Education Programming. This is the same programming that we are expanding upon for the current request. LCF has completed and managed this grant agreement successfully; all interim reports were submitted complete and on time, with the final report being submitted on March 31, 2016. Funding was used as proposed to implement the SLURRP environmental education initiative in three South Baltimore schools and conduct community engagement events that served 1,494 residents of all ages. Four sub-grants were successfully awarded to The National Aquarium in Baltimore's Conservation Team to construct a floating footbridge over wetlands at Fort McHenry National Monument and Historic Shrine; Ben Franklin High School at Masonville Cove to support citizen science, environmental activities, and agricultural programming at the school; Lakeland Elementary/Middle School to help support their Outdoor Ecology Classroom, which includes a greenhouse with planting tables, stream tables, and keyhole gardens, which use food waste from the cafeteria to create compost for growing plants; and Pathway Church of God, a neighborhood church that planted an aesthetically pleasing, low-maintenance milkweed garden, the planning and construction of which educated community members about native plants and run off mitigation, and helped to instill a sense of environmental stewardship in the local community. hese projects were completed as proposed; however a three-month funding extension was requested and granted due to the sub-grantees needing additional time to fully and properly execute their programs.

NOAA B-WET (2012-2015): Within the past three years, a relevant project that is similar in size and scope that has been completed with a federal funding agreement is a grant from NOAA's B-WET environmental education program for the SLURRP initiative referenced in this application. Living Classrooms Foundation has received a continuous series of these NOAA grants since the inception of B-WET in 2002. The most recent of these was a 3-year grant awarded in 2012 ($120,000 per year, $360,000 total). Year 1 took place from July 2012 - June 2013, Year 2 took place from July 2013-June 2014, and Year 3 took place from July 2014-June 2015. LCF competently executed the activities funded by all three years of the B-WET grant agreements, and met the stated objectives of the

agreements. We punctually reported to NOAA on the achievement of program outcomes and outputs, and reports were submitted in a timely fashion according to the schedule presented in the grant agreements.



Lakeland Elementary Middle School #012

"Respectful, Responsible, Ready"

With enthusiasm, dedication, and patience, we create a safe learning community, full of opportunities, that challenge all individuals in our Lakeland family to explore, grow, and achieve.

April 5, 2016

Ms. Lorraine Andrews Warnick

Living Classrooms Foundation

Director, Masonville Cove Environment Education Campus

1000 Frankfurst Ave

Baltimore, MD 21226

On behalf, of Lakeland Elementary/Middle School, I am writing in support of the Masonville Cove Environmental Education Center (MCEEC) programs. Our second, third, fourth, and fifth grade students have been participating in various Living Classrooms programs including BEESMART (Baltimore Environmental Education Summer Math And Reading Trailblazers), as a continued partnership that has lasted over ten years with our school. The lessons have been well organized and have engaged students as active participants in the learning process. The hands-on activities are excellent reinforcements of our science curriculum and provide opportunities that are largely unavailable due to limited school funds. The programs also supplement classrooms curriculum in social studies by teaching about the geography of Maryland and help support math objectives by applying real world skills. Lakeland teachers have also benefitted from and will continue to participate in Living Classrooms professional development workshops that provide activities and lesson plans that can be integrated into classroom teaching.

Living Classrooms' MCEEC educators consistently impress me with their knowledge of content and their ability to manage student behavior, while delivering rich and engaging lessons. Their passion for the environment and teaching children is always evident. Through MCEEC, our students have learned about storm water pollution via the hands-on runoff model, studied and created watershed models, and learned about the Chesapeake Bay and the important habitats that can be found there. The students have been active participants in their neighborhoods by picking up trash, stenciling local storm drains, making informational brochures to distribute to the community, and working with your staff on the design and implementation of our very own Lakeland School Garden. The students have been provided with multiple opportunities to go on field trips to your urban nature center and experience Baltimore and its surrounding areas.

Lakeland is committed to continuing this partnership. The MCEEC is an invaluable resource for the students and teachers of Lakeland and Baltimore City. Our students receiving these lessons are gaining the background knowledge necessary to ensure that they are on track to meet their high school environmental literacy graduation requirements. I consider my students, the school community, and myself very lucky to be able to participate in such an enriching program.

Sincerely,

Najib Jammal

Principal

Najib Jammal,, Principal • LaJuan Alston, Resident Principal • Luis Espinoza,, Assistant Principal
2921 Stranden Rd, Baltimore, MD 21230 Phone (410) 396-1406 Fax (410) 396-0015
http://www.baltimorecityschools.org/Page/2374 Title I Schoolwide School

Maree G. Farring
Elementary - Middle School

300 Pontiac Avenue
Baltimore, MD 21225
410-396-1404

Mrs. Lorraine Warnick
Masonville Cove Environmental Education Campus
1000 Frankfurst Ave
Baltimore, MD 21226

Dear Mrs Warnick:

I am writing this letter as an indication of our schools strong support for the programs, such as SLURRP and BEESMART, that Living Classrooms offers out of the Masonville Cove Environmental Education Campus. Living Classrooms educators have been doing work with our school for over ten years. We have found your staff to be professional, well prepared, and excited about the environmental science content they present. Their excitement is mirrored in the excitement shown by the students during their interactions and presentations. This offers pivotal support to our classroom instruction by engaging students on topics and offering an experience that we simply cannot offer in the traditional classroom setting. Additionally, our teachers benefit from and will continue to participate in Living Classrooms professional development workshops that provide activities and lessons that can be directly integrated into classroom teaching.

Living Classrooms helps fulfill our need for Environmental Literacy for students in grades three, four and five by offering a multi-tiered experience: multiple classroom outreaches per year including activities in our own schoolyard, fieldtrips to the Masonville Cove Environmental Education Campus where students can see their connections to the local and global waterways first-hand, and STEM-based summer programs. Environmental education is very important to our students for several reasons including the following:

1. Science education is secondary to Math and Language Arts, thus many students are missing the Science fundamentals (Masonville lessons provide environmental education/geography).
2. The Patapsco River is near our school. Students are exposed to natural resources that are near their homes. The conservation of the river has a deep impact on their homes and community.

In conclusion, I believe Masonville Cove and Living Classrooms are providing a needed educational experience for students, exposing them to environmental education and environmental concerns making our science instruction tangible and meaningful to them. More students should be exposed to their good work and commitment. Maree G. Farring Elementary Middle School is ready to continue this partnership for many years.

Most Sincerely,

Mr. Ben Crandall
Principal
Maree G. Farring Elem/Middle

OMB Number: 4040-0004
Expiration Date: 8/31/2016

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 04/07/2016

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Living Classrooms Foundation

* b. Employer/Taxpayer Identification Number (EIN/TIN): 52-1369524

* c. Organizational DUNS: 6061037600000

d. Address:

* Street1: 802 S. Caroline Street
Street2:
* City: Baltimore
County/Parish:
* State: MD: Maryland
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 21231-3332

e. Organizational Unit:

Department Name: Masonville Cove

Division Name: Education

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Ms.
* First Name: Christine
Middle Name:
* Last Name: Truett
Suffix:

Title: Director of Education

Organizational Affiliation: Living Classrooms Foundation

* Telephone Number: 4106850295
Fax Number: 4107528433

* Email: christine@livingclassrooms.org

NE-96349901-0

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

*** Other (specify):**

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.951

CFDA Title:

Environmental Education Grants

*** 12. Funding Opportunity Number:**

EPA-EE-16-01

*** Title:**

Environmental Education Local Grants Program -- Solicitation Notice for 2016

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Masonville Cove Environmental Education Programming

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 3rd
* b. Program/Project: 2nd

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/01/2016
* b. End Date: 08/31/2017

18. Estimated Funding ($):

* a. Federal	80,000.00 ✓ 34.52
* b. Applicant	151,813.00 ✓ 65.48
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	231,813.00 ✓

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	
* First Name:	Analeigh
Middle Name:	
* Last Name:	Smith
Suffix:	
* Title:	Development Officer
* Telephone Number:	41-685-0295
Fax Number:	
* Email:	asmith@livingclassrooms.org
* Signature of Authorized Representative:	Analeigh Smith ✓
* Date Signed:	04/07/2016

NEGOTIATED INDIRECT COST RATE AGREEMENT (NICRA)
NONPROFIT ORGANIZATION

ORGANIZATION:
Living Classrooms Foundation (LCF)
802 South Caroline Street
Baltimore, MD 21231

EIN: 52-1369524

DATE August 2, 2016
FILE REF: This replaces the agreement dated June 1, 2015

The rates approved in this Agreement are for use on grants, contracts, and other agreements with the Federal Government to which OMB Circular No. A-122 applies, subject to the conditions in Section II, A, below. The rates were negotiated between Living Classrooms Foundation (LCF) and the U.S. Department of Labor in accordance with the authority contained in Attachment A, Section E.2 (a), of the Circular. Indirect rates for fiscal years that begin on or after 12/26/2014 are subject to 2 CFR Part 200, Subpart E, in accordance with the authority contained in 2 CFR, Part 200, Appendix IV, C.2.

SECTION I: RATES

TYPE	EFFECTIVE PERIOD FROM	TO	RATE*	LOCATION	APPLICABLE TO
INDIRECT COST:					
Final	1/1/12	12/31/12	18.80%	All	All Programs
Final	1/1/13	12/31/13	18.23%	All	All Programs
Final	1/1/14	12/31/14	21.60%	All	All Programs
Provisional	1/1/15	12/31/15	18.23%	All	All Programs
Provisional	1/1/16	12/31/16	18.23%	All	All Programs

(See Special Remarks)

* **BASE:** Direct salaries and wages and applicable fringe benefits.

TREATMENT OF FRINGE BENEFITS: LCF's accounting system tracks fringe benefit costs by individual employee and charges those costs directly or indirectly in the same manner as salary costs are recorded. LCF does not need to have a fringe benefit rate established.

TREATMENT OF PAID ABSENCES: Release time costs (vacation leave earned, sick leave used and holiday pay) are considered part of salary costs. Consequently separate claims for release time costs are not made. LCF's accounting system records release time as direct or indirect cost in the same manner that salary costs are recorded. Vacation leave earned but not used during each fiscal period is recorded as a cost in the period earned.

SECTION II: GENERAL

A. **LIMITATIONS:** Use of the rate(s) contained in the Agreement is subject to all statutory or administrative limitations and is applicable to a given Federal award or contract only to the extent that funds are available. Acceptance of the rate(s) agreed to herein is predicated upon the following conditions:

(1) that no costs other than those incurred by the non-Federal entity or contractor were included in its indirect cost pool as finally accepted and that such incurred costs are legal obligations of the non-Federal entity and allowable under the governing cost principles,
(2) that the same costs that have been treated as indirect costs have not been claimed as direct costs,
(3) that similar types of costs have been accorded consistent treatment, and
(4) that the information provided by the non-Federal entity or contractor which was used as a basis for acceptance of the rate(s) agreed to herein is not subsequently found to be materially inaccurate by the Federal government. In such situations, the rate(s) may be subject to renegotiation at the discretion of the Federal government.
(5) The rates cited in this Agreement are subject to audit.

B. **ACCOUNTING CHANGES:** This agreement is based on the accounting system purported by the non-Federal entity or contractor to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval from the Division of Cost Determination. Such changes include, but are not limited to changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

C. **NOTIFICATION TO FEDERAL AGENCIES:** A copy of this document is to be provided by the non-Federal entity or contractor to other Federal funding sources as a means of notifying them of the Agreement contained herein.

D. **PROVISIONAL-FINAL RATES AND ADJUSTMENTS:** When seeking initial reimbursement of indirect costs using the provisional/final rate methodology, a provisional proposal must be submitted within 90 days of receiving a Federal award (financial assistance, grants, cooperative agreements, and cost reimbursable contracts) that requires accounting for actual costs incurred. The non-Federal entity or contractor must submit an indirect cost rate proposal within six (6) months after the end of their fiscal year to establish a final rate.

Once a final rate is negotiated, billings and charges to Federal awards must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the non-Federal entity or contractor may not recover all indirect costs. Conversely, if the final rate is less than the

provisional rate, the non-Federal entity or contractor will be required to reimburse the funding agency for the excess billings.

Non-Federal entities or contractors receiving a Federal cost reimbursable contract(s) - Must adhere with FAR 52.216-7(d)(2)(v), to settle final indirect cost rates typically on an annual basis:

> "The contractor shall update the billings on all contracts to reflect the final settled rates and update the schedule of cumulative direct and indirect costs claimed and billed, as required in paragraph (d)(2)(iii)(I) of this sections, within 60 days after settlement of final indirect cost rates."

In addition, the contractor shall provide to the Contracting Officer the noted cumulative costs schedule within 60 days of the execution of this agreement.

If the non-Federal entity or contractor has completed performance under any of the contracts covered by this Agreement, a final invoice or voucher must be submitted no later than 120 days from the date on which this Agreement is executed, following guidance from FAR 52.216-7(d)(5) and FAR 52.216-7(h).

Non-Federal entities receiving Federal awards (financial assistance, grants, and cooperative agreements) – Note that even if Federal awards are administratively closed prior to the settlement of final indirect cost rates, non-Federal entities still must comply with the following 2 CFR Part 200 clauses stating, in part:

> §200.344 Post-closeout adjustments and continuing responsibilities
>
> (a) The closeout of a Federal award does not affect any of the following:
>
> (1) The right of the Federal awarding agency or pass-through entity to disallow costs and recover funds on the basis of a later audit or other review. The Federal awarding agency or pass-through entity must make any cost disallowance determination and notify the non-Federal entity within the record retention period.
> (2) The obligation of the non-Federal entity to return any funds due as a result of later refunds, corrections, or other transactions including final indirect cost rate adjustments.
>
> §200.345 Collection of amounts due
>
> (a) Any funds paid to the non-Federal entity in excess of the amount to which the non-Federal entity is finally determined to be entitled under the terms of the Federal award constitute a debt to the Federal Government.
>
> (b) Except where otherwise provided by statutes or regulations, the Federal awarding agency will charge interest on an overdue debt in accordance with the Federal Claims Collection Standards (31 CFR parts 900 through 999). The date

from which interest is computed is not extended by litigation or the filing of any form of appeal.

E. **SPECIAL REMARKS**:

1. Indirect costs charged to Federal contracts by means other than the rate(s) cited in this Agreement should be adjusted to the applicable rate cited herein and be applied to the appropriate base to identify the proper amount of indirect costs allocable to the program.

2. Contracts providing for ceilings as to the indirect cost rate(s) or amount(s) which are indicated in Section I above, will be subject to the ceilings stipulated in the contract. The ceiling rate or the rate(s) cited in this Agreement, whichever is lower, will be used to determine the maximum allowable indirect cost on the contract.

3. Administrative costs consist of all **Direct** and **Indirect** costs associated with the management of an organization's programs. Organizations should refer to their contracts/grants terms and specific program legislation for the applicable definition of Administrative Costs and any related limitations.

*** Intentionally Left Blank ***

4. LCF's indirect pool is comprised of the following elements: Salaries, Fringe Benefits, Advertising (for employment), Bank Fees (nominal), Conferences, Contract services, Drug Testing, Food, Fuel, In-kind, Insurance, Maintenance, Miscellaneous, Office Expense, Postage, Printing, Professional Fees, Program Supplies, Rent, Telephone, Travel, Uniforms, and Utilities.

ACCEPTANCE

BY THE ORGANIZATION:	**BY THE COGNIZANT AGENCY ON BEHALF OF THE FEDERAL GOVERNMENT:**
Living Classrooms Foundation (LCF) 802 South Caroline Street Baltimore, MD 21231	U.S. DEPARTMENT OF LABOR Division of Cost Determination 224 Westbridge Place Mount Airy, NC 27030
(Grantee/Contractor)	(Government Agency)
Nicole Ruocco	
(Signature)	(Signature)
Nicole Ruocco	for Victor M. Lopez
(Name)	(Name)
CFO	Chief, Division of Cost Determination
(Title)	(Title)
8/4/16	August 2 , 2016
(Date)	(Date)
	Negotiated By: Damon Tomchick Telephone No.: 240-475-2786

U.S. ENVIRONMENTAL PROTECTION AGENCY

Assistance Amendment

GRANT NUMBER (FAIN): 96349701	
MODIFICATION NUMBER: 1	**DATE OF AWARD** 08/28/2017
PROGRAM CODE: NE	
TYPE OF ACTION No Cost Amendment	**MAILING DATE** 08/28/2017
PAYMENT METHOD: ASAP	**ACH#** 30437

RECIPIENT TYPE:
Not for Profit

Send Payment Request to:
N/A

RECIPIENT:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231
EIN: 52-1369524

PAYEE:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Christine Truett 802 S. Caroline Street Baltimore, MD 21231 **E-Mail:** christine@livingclassrooms.org **Phone:** 410-685-0295	Kathleen Kirkland 1650 Arch Street, 3CG00 Philadelphia, PA 19103-2029 **E-Mail:** Kirkland.Kathleen@epa.gov **Phone:** 215-814-5176	Matthew Creedon Grants and Audit Management Branch, 3PM70 **E-Mail:** Creedon.Matthew@epa.gov **Phone:** 215-814-5174

PROJECT TITLE AND EXPLANATION OF CHANGES
Masonville Cove Environmental Education Programming
This amendment extends the budget and project periods to 12/31/17, and updates the Terms and Conditions.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
09/01/2016 - 12/31/2017	09/01/2016 - 12/31/2017	$225,807.00	$225,807.00

NOTICE OF AWARD

Based on your Application dated 04/07/2016 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards $. EPA agrees to cost-share 26.57% of all approved budget period costs incurred, up to and not exceeding total federal funding of $60,000. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.

ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	**ORGANIZATION / ADDRESS**
US EPA Region 3, 3PM70 1650 Arch Street Philadelphia, PA 19103-2029	U.S. EPA, Region 3 Office of Communications and Government Relations 3CG00 1650 Arch Street Philadelphia, PA 19103-2029

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official Lisa White - Acting Branch Chief — **DATE** 08/28/2017

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	$ 60,000	$	$ 60,000
EPA In-Kind Amount	$ 0	$	$ 0
Unexpended Prior Year Balance	$ 0	$	$ 0
Other Federal Funds	$ 0	$	$ 0
Recipient Contribution	$ 165,807	$	$ 165,807
State Contribution	$ 0	$	$ 0
Local Contribution	$ 0	$	$ 0
Other Contribution	$ 0	$	$ 0
Allowable Project Cost	$ 225,807	$ 0	$ 225,807

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.951 - Environmental Education Grant Program	National Environmental Educ. Act: Sec. 6	2 CFR 200 2 CFR 1500 40 CFR 33 and 40 CFR 47

Fiscal

Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	$157,688
2. Fringe Benefits	$18,923
3. Travel	$0
4. Equipment	$0
5. Supplies	$2,000
6. Contractual	$0
7. Construction	$0
8. Other	$15,000
9. Total Direct Charges	$193,611
10. Indirect Costs: % Base SEE ADMIN CONDITION 2	$32,196
11. Total (Share: Recipient 73.43 % Federal 26.57 %.)	$225,807
12. Total Approved Assistance Amount	$60,000
13. Program Income	$0
14. Total EPA Amount Awarded This Action	$0
15. Total EPA Amount Awarded To Date	$60,000

Administrative Conditions

Administrative Condition number 1 has been updated and Administrative Condition number 7 has been added as follows:

1. **General Terms and Conditions**

   The recipient agrees to comply with the current EPA general terms and conditions available at: https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-april-27-2017-or-later. These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at http://www.epa.gov/grants/grant-terms-and-conditions.

7. **Extension of Project/Budget Period Expiration Date**

EPA has not exercised the waiver option to allow automatic one-time extensions for non-research grants under 2 CFR 200.308 (d)(2). Therefore, if a no-cost time extension is necessary to extend the period of availability of funds the recipient must submit a written request to the EPA prior to the budget/project period expiration dates. The written request must include: a written justification describing the need for additional time, an estimated date of completion, and a revised schedule for project completion including updated milestone target dates for the approved workplan activities. In addition, if there are overdue reports required by the administrative and programmatic terms and conditions of this assistance agreement, the recipient must ensure that they are submitted along with or prior to submitting the no-cost time extension request.

All Other Terms and Conditions Remain the Same

U.S. ENVIRONMENTAL PROTECTION AGENCY

Grant Agreement

GRANT NUMBER (FAIN):	**96349701**
MODIFICATION NUMBER:	**0**
PROGRAM CODE:	**NE**
DATE OF AWARD	12/09/2016
TYPE OF ACTION	New
MAILING DATE	12/16/2016
PAYMENT METHOD:	ASAP
ACH#	30437

RECIPIENT TYPE:
Not for Profit

Send Payment Request to:
N/A

RECIPIENT:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231
EIN: 52-1369524

PAYEE:
The Living Classrooms Foundation Inc.
802 S. Caroline Street
Baltimore, MD 21231

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Christine Truett 802 S. Caroline Street Baltimore, MD 21231 **E-Mail:** christine@livingclassrooms.org **Phone:** 410-685-0295	Kathleen Kirkland 1650 Arch Street, 3CR00 Philadelphia, PA 19103-2029 **E-Mail:** Kirkland.Kathleen@epa.gov **Phone:** 215-814-5176	Eleanor Sullivan Grants and Audit Management Branch, 3PM70 **E-Mail:** sullivan.elenor@epa.gov **Phone:** 215-814-3312

PROJECT TITLE AND DESCRIPTION
Masonville Cove Environmental Education Programming
Program goals are: 1) involvement of two additional schools in the SLURRP environmental education initiative during 2016-17; 2) extension of School Leadership in Urban Runoff Reduction Project (SLURRP) participants' learning into summer 2017 through Baltimore Environmental Education Math and Reading Trailblazers (BEESMART); and 3) Community Engagement events including weekend environmental education programming for families, evening presentations for adults, regular on-site guided walks, and a spring environmental festival. Through these activities, the recipient will increase participants' environmental knowledge of concepts such as storm water runoff and how to prevent it, help students learn causes and sources of pollution and how to prevent it, teach the importance of environmental stewardship to the community, provide an awareness of land use and local environmental issues, and to create behavioral change in regards to both education and environmental literacy. Academically, students will exhibit increases in achievement as they complete program activities.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
09/01/2016 - 08/31/2017	09/01/2016 - 08/31/2017	$225,807.00	$225,807.00

NOTICE OF AWARD

Based on your Application dated 04/07/2016 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards $60,000. EPA agrees to cost-share 26.57% of all approved budget period costs incurred, up to and not exceeding total federal funding of $60,000. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.

ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	**ORGANIZATION / ADDRESS**
US EPA Region 3, 3PM70 1650 Arch Street Philadelphia, PA 19103-2029	U.S. EPA, Region 3 Office of Communications and Government Relations (3CR00) 1650 Arch Street, Philadelphia, PA 19103-2029

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official for Diana Esher - Assistant Regional Administrator for Policy and Management John Krakowiak - Award Official delegate	**DATE** 12/09/2016

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	$	$ 60,000	$ 60,000
EPA In-Kind Amount	$	$	$ 0
Unexpended Prior Year Balance	$	$	$ 0
Other Federal Funds	$	$	$ 0
Recipient Contribution	$	$ 165,807	$ 165,807
State Contribution	$	$	$ 0
Local Contribution	$	$	$ 0
Other Contribution	$	$	$ 0
Allowable Project Cost	$ 0	$ 225,807	$ 225,807

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.951 - Environmental Education Grant Program	National Environmental Educ. Act: Sec. 6	2 CFR 200 2 CFR 1500 40 CFR 33 and 40 CFR 47

Fiscal

Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
-	1703HD0006	1617	B	03H00EE	301ME9	4183	-	-	60,000
									60,000

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	$157,688
2. Fringe Benefits	$18,923
3. Travel	$0
4. Equipment	$0
5. Supplies	$2,000
6. Contractual	$0
7. Construction	$0
8. Other	$15,000
9. Total Direct Charges	$193,611
10. Indirect Costs: % Base SEE ADMINISTRATIVE COND #2	$32,196
11. Total (Share: Recipient 73.43 % Federal 26.57 %.)	$225,807
12. Total Approved Assistance Amount	$60,000
13. Program Income	$0
14. Total EPA Amount Awarded This Action	$60,000
15. Total EPA Amount Awarded To Date	$60,000

Administrative Conditions

1. **General Terms and Conditions**

The recipient agrees to comply with the current EPA general terms and conditions available at https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-3-2016-or-later.

These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at http://www.epa.gov/grants/grant-terms-and-conditions.

2. **Indirect Costs**

a. If the recipient does not have a previously established indirect cost rate, and is not approved for use of a 10% flat IDC rate, it agrees to prepare and submit its indirect cost rate proposal in accordance with the appropriate federal cost principles, 2 CFR 200.414 "Indirect (F&A) Costs".

The recipient must send its proposal to its cognizant federal agency within ninety (90) days from the effective date of the award of this assistance agreement. The recipient must carbon copy this EPA office with its proposal.

If EPA is the cognizant federal agency of the non-profit organization, the recipient must send its indirect cost rate proposal within ninety (90) days from the effective date of the award to:

Via Email: OGD_ IndirectCost@EPA.GOV

Via Regular Mail:
National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, MC 3903R
Washington, DC 20460
Attn: OGD Indirect Cost Rate Control Desk

Via Fedex/UPS:
National Policy, Training and Compliance Division
Office of Grants and Debarment
U.S. Environmental Protection Agency
1300 Pennsylvania Avenue, NW, 5th Floor
Washington, DC 20004
Attn: OGD Indirect Cost Rate Control Desk

The non-profit recipient agrees to follow the enclosed "Sample Indirect Cost Proposal Format for Nonprofit Organizations." The sample proposal may also be accessed at: Sample Indirect Cost Proposal Format For Nonprofit Organizations | Grants and Debarment | US EPA . Another resource is the "EPA Guide on How to Prepare an Indirect Cost Rate Proposal for a Non-Profit Organization," and may be found at http://www.epa.gov/ogd/recipient/EPATraineeIndirect.pdf

b. Recipients may not draw down indirect costs unless they: i) have a current rate agreement; ii) have been approved for a flat 10% rate; or iii) have submitted, within 90 days of award, an indirect cost rate proposal to their cognizant federal agency for review and approval and a final rate has been determined by the cognizant agency.

c. Recipients are responsible for maintaining an approved indirect cost rate. Recipients with differences between their provisional rates and final rates are not entitled to more than the amount identified in the

award for indirect costs without EPA approval.

3. Annual Federal Financial Report

Pursuant to 2 CFR 200.327 and 200.343, the recipient agrees to submit to EPA an annual Federal Financial Report (FFR) (SF-425) when the budget period is longer than one year. The following reporting period end dates shall be used for interim reports: 3/31, 6/30, 9/30, or 12/31. Interim reports shall be submitted no later than 90 days after the end of each reporting period.

The form is available on the internet at http://www.epa.gov/financial/forms. **All FFRs must be submitted to the Las Vegas Finance Center (LVFC) via email LVFC-grants@epa.gov.**

4. Utilization Of Small, Minority And Women's Business Enterprises (MBE/WBE)

GENERAL COMPLIANCE, 40 CFR, Part 33
The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33.

REPORTING PROVISION
MBE/WBE reporting is required annually for assistance agreements where there are funds budgeted for procuring construction, equipment, services and supplies, including funds budgeted for direct procurement by the recipient or procurement under subawards or loans in the "Other" category, that exceed the threshold amount of $150,000, including amendments and/or modifications.

Based on EPA's review of the planned budget, this award does not meet the condition above and is not subject to the reporting requirements of the Disadvantaged Business Enterprise (DBE) Program. However, if during the performance of the award the total of all funds expended for direct procurement by the recipient and procurement under subawards or loans in the "Other" category exceeds $150,000, annual reports will be required in accordance with the reporting paragraph below and you are required to notify your grant specialist for additional instructions.

The recipient also agrees to request prior approval from EPA for procurements that may activate DBE Program reporting requirements.

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Good Faith Efforts requirements as described in 40 CFR Part 33 Subpart C and Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D and explained below.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E
When required, MBE/WBE reports must be submitted annually. The recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis. All procurement actions are reportable, not just that portion which exceeds $150,000.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the final report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Final reports are due by October 30th or 90 days after the end of the project period, whichever comes first.

The reporting requirement is based on total procurements. Recipients with expended and/or budgeted funds for procurement are required to report annually whether the planned procurements take place during the reporting period or not. If no budgeted procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be **signed and emailed to R3_MBE-WBE_Reports@epa.gov as a pdf file,**

or, if that is not possible, mailed to Hana Hyland, Small Business Program Coordinator (3DA10), U.S. EPA - Region III, 1650 Arch Street, Philadelphia, PA 19103-2029 with a courtesy copy to the EPA Grant Specialist. The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm;

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D
This assistance agreement is a Technical Assistance Grant (TAG); or the award amount is $250,000 or less; or the total dollar amount of all of the recipient's financial assistance agreements from EPA in the current Federal fiscal year is $250,000 or less. Therefore, the recipient of this assistance agreement is exempt from the fair share objective requirements of 40 CFR, Part 33, Subpart D, and is not required to negotiate fair share objectives/goals for the utilization of MBE/WBEs in its procurements.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D
A recipient must negotiate with the appropriate EPA award official, or his/her designee, fair share objectives for MBE and WBE participation in procurement under the financial assistance agreements.

In accordance with 40 CFR, Section 33.411 some recipients may be exempt from the fair share objectives requirements as described in 40 CFR, Part 33, Subpart D. Recipients should work with their DBE coordinator, if they think their organization may qualify for an exemption.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C
Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained:

(a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

(b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

(c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

(d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

(e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.

(f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

CONTRACT ADMINISTRATION PROVISIONS, 40 CFR, Section 33.302
The recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.

BIDDERS LIST, 40 CFR, Section 33.501(b) and (c)
Recipients of a Continuing Environmental Program Grant or other annual reporting grant, agree to create

and maintain a bidders list. Recipients of an EPA financial assistance agreement to capitalize a revolving loan fund also agree to require entities receiving identified loans to create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Please see 40 CFR, Section 33.501 (b) and (c) for specific requirements and exemptions.

5. **Mandatory Non-Profit Recipient Training**

Recipient acknowledges that two employees of this recipient organization must complete the mandatory on-line training, "EPA Grant Management Training for Non-Profit Applicants and Recipients." One person must be the project manager, or equivalent, for this assistance agreement. The other individual must be the person authorized to draw down funds for this assistance agreement. Both employees must complete the training prior to the receipt of any grant funds. The recipient may access the course through the internet at:

http://www.epa.gov/ogd/training/recip_train.htm

At the end of the course the certifications of completion must be signed and emailed to R3_Grant_Applications@epa.gov as a pdf file, or if that is not possible, mailed to EPA, Grants Management Officer (3PM70), 1650 Arch Street, Philadelphia, PA 19114. EPA will not release funds to the recipient until the required training is completed. Certifications must be maintained throughout the life of the agreement. The training must be completed every three (3) years by both employees and when there are personnel changes.

6. **Unpaid Federal Tax Liabilities and Felony Convictions for Non-profit and For-profit Organizations**

Consistent with the Continuing Appropriations Act, 2017, Public Law 114-223, this award is subject to the provisions contained in the Consolidated Appropriations Act, 2016, Public Law 114-113, Division E, Title VII, Sections 745 and 746 regarding unpaid federal tax liabilities and federal felony convictions, which also have been included in prior appropriations acts. Accordingly, by accepting this award the recipient acknowledges that it: (1) is not subject to any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, and (2) has not been convicted of a felony criminal conviction under any Federal law within 24 months preceding the award, unless EPA has considered suspension or debarment of the corporation based on these tax liabilities or convictions and determined that such action is not necessary to protect the Government's interests. If the recipient fails to comply with these provisions, EPA will annul this agreement and may recover any funds the recipient has expended in violation of Sections 745 and 746.

Programmatic Conditions

1. On-Site Evaluation
The recipient agrees to participate in a detailed on-site evaluation to assess the adequacy of program progress, if selected by EPA. The evaluation will include an overview of the project and project expenditures. The evaluation schedule will be negotiated by the recipient and the EPA Project Officer.

2. Progress Reports
The recipient agrees to submit the following progress reports to the EPA Project Officer: an informal progress report due three (3) months from the start of the budget/project start date, and a formal semi-annual progress report due within 30 days of the end of the six month period.

3. Performance Reports
In accordance with 40 CFR 30.51(d), the recipient agrees to include in performance reports submitted under this agreement brief information on each of the following areas: 1) a comparison of actual accomplishments with the anticipated outputs/outcomes specified in the assistance agreement work plan;

2) reasons why anticipated outputs/outcomes were not met; and 3) other pertinent information, including, when appropriate, analysis and explanation of cost overruns or high unit costs.

In accordance with 40 CFR 30.51(f), the recipient agrees that it will notify EPA of problems, delays, or adverse conditions which materially impair the ability to meet the outputs/outcomes specified in the assistance agreement work plan.

4. Sub-award Reporting Requirement
The recipient must report on its sub-award monitoring activities under 2 CFR 200.331(d). Examples of items that must be reported if the pass-through entity has the information available are:
a. summaries of results of reviews of financial and programmatic reports
b. summaries of findings from site visits and/or desk reviews to ensure effective subrecipient performance
c. environmental results the subrecipient achieved
d. summaries of audit findings and related pass-through entity management decisions
e. actions the pass-through entity has taken to correct deficiencies

5. Final Report and Tangible Products
The recipient agrees to submit two copies of the final report and two copies of all tangible products derived as a result of the project, e.g. videos, curricula, photos, etc., to the EPA Project Officer. These are due within ninety (90) days after the end of the project period. The report will clearly describe what happened during the project and briefly, but specifically, address the following items:
a. A narrative stating how you accomplished what you described in your work plan and what changes took place as a result of the project EPA supported.
b. A section giving "tips" on how to undertake a similar project, i.e., what were the "lessons learned".
c. Two copies of any "work products" produced including an agenda of workshops or training sessions to illustrate what you have achieved. If possible, include a video with highlights of the session and/or a list of key materials used.

6. Work Products Disclaimer
The recipient agrees to issue the following disclaimer on all work products disseminated: "Although this project is funded in part by the Environmental Protection Agency, it does not necessarily reflect the opinion or position of the EPA".

7. EPA Funding
The recipient agrees to credit EPA as a source of project funds, when appropriate, either by listing "U.S. Environmental Protection Agency" or stating that "This product was funded in part by the U.S. EPA Environmental Education Program."

8. Pre-Award Cost
Pre-Award Costs have been approved in accordance with the recipient's application dated 4/7/16.

9. Minimum Matching Share Requirement
This award and the resulting federal funding share of 26% as shown under "Notice of Award" above is based on estimated costs requested in the recipient's application dated 4/7/16. While actual total costs may differ than those estimates, the recipient is required to provide no less than 25% of the final allowable program/project costs (outlays). EPA's participation shall not exceed the total amount of federal funds awarded or the maximum federal share for this program of 75% of the final total allowable program/project costs.

10. Cybersecurity
(a) The recipient agrees that when collecting and managing environmental data under this assistance agreement, it will protect the data by following all applicable State law cybersecurity requirements.
(b) (1) EPA must ensure that any connections between the recipient's network or information system and EPA networks used by the recipient to transfer data under this agreement, are secure.
For purposes of this Section, a connection is defined as a dedicated persistent interface between an Agency IT system and an external IT system for the purpose of transferring information. Transitory,

user-controlled connections such as website browsing are excluded from this definition.
If the recipient's connections as defined above do not go through the Environmental Information Exchange Network or EPA's Central Data Exchange, the recipient agrees to contact the EPA Project Officer (PO) and work with the designated Regional/Headquarters Information Security Officer to ensure that the connections meet EPA security requirements, including entering into Interconnection Service Agreements as appropriate. This condition does not apply to manual entry of data by the recipient into systems operated and used by EPA's regulatory programs for the submission of reporting and/or compliance data.
(2) The recipient agrees that any subawards it makes under this agreement will require the subrecipient to comply with the requirements in (b)(1) if the subrecipient's network or information system is connected to EPA networks to transfer data to the Agency using systems other than the Environmental Information Exchange Network or EPA's Central Data Exchange. The recipient will be in compliance with this condition: by including this requirement in subaward agreements; and during subrecipient monitoring deemed necessary by the recipient under 2 CFR 200.331(d), by inquiring whether the subrecipient has contacted the EPA Project Officer. Nothing in this condition requires the recipient to contact the EPA Project Officer on behalf of a subrecipient or to be involved in the negotiation of an Interconnection Service Agreement between the subrecipient and EPA.